NEW EQUIPMENT DIGEST

A Penton Publication

June, 1959

Volume 24—Number 6

Copyright 1959 by The Penton Publishing Co.

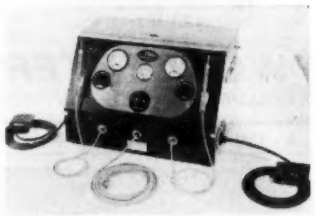
CHECK AND PASS ALONG

✓	NAME	See No.

Use Inquiry Slips—Pages 8 and 104

EQUIPMENT • MATERIALS • PROCESSES • DESIGNS • APPLICATIONS • LITERATURE

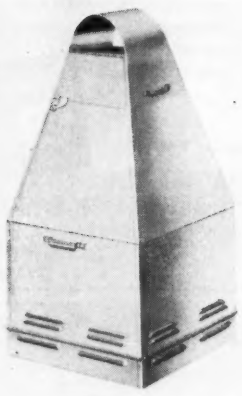
ABRASIVE BLAST CUTTER
for hard or brittle materials



Any hard or brittle material can be cut or abraded without shock or heat damage by a controlled stream of gas-propelled abrasive from the Duplex Model D Airbrasive unit. Two units in one housing provide doubled capacity, a choice of abrasive materials, use of two different cutting tips, or allow two operators to work from one unit. Abrasive emerging from the nozzle at 1100 fps produces a cool, shockless, and controllable cutting action. Applications include deburring; wire stripping; calibrating and frosting glassware; cutting, shaping, and drilling fragile crystals; and removing oxides and other coatings. Aluminum oxide in the 27-micron range or lighter abrasives are used. Any compressed dry gas source of 80 psi can be used. Made by **S. S. White Dental Mfg. Co.**, Industrial Div., 10 E. 40th St., New York 16, N. Y.

▲ For more details circle **NED-1 F9** on enclosed inquiry slip ▲

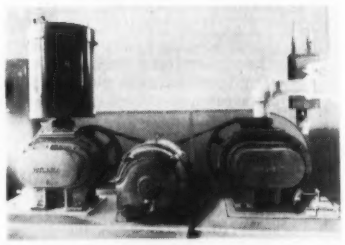
6-BUSHEL INCINERATOR
outdoor unit is shipped assembled



Waste paper, cartons, sweepings, food scraps, rags, and other burnable refuse are reduced to a fine ash in any weather by this 6-bu outdoor incinerator. Once loaded and ignited, it requires no attention. Its draft control burns damp, green, or dry refuse without fire danger or blowing bits of paper. Made of aluminized steel, it has a hinged hood and 14-in. square opening for loading. Base is 24 in. square and height is 53 in. Double wall interior construction has replaceable inner panels. Made by **Alsto Co.**, 4007 Detroit Ave., Cleveland 13, Ohio.

▲ For more details circle **NED-2 F9** on enclosed inquiry slip ▲

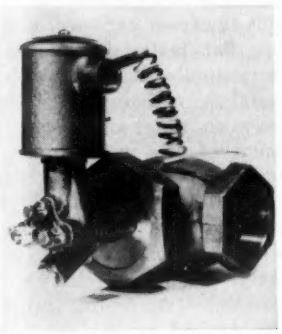
PNEUMATIC FEEDER
conveys from bin, hopper, conveyor



Packaged rotary vane type feeder facilitates the introduction of material into any air pressure conveying unit. It can be adapted to small or large operations and will handle any material which can be conveyed pneumatically. Packaged feeder is put into position, and a single air connection made for feeding from bin, hopper, or conveyor. It can be hung from a hopper or supported on its own base or stand. Air entry in both head plates results in a thorough pocket cleaning. Capacity of ½, ¾, and 1-hp units is variable. Made by **Fuller Co.**, Catasauqua, Pa.

▲ For more details circle **NED-3 F9** on enclosed inquiry slip ▲

SOLENOID VALVES
filter built into control head



Improved Type HV and HV-P Velvetrol solenoid valves now provide better performance in hydraulic systems, or in precision filling operations. New features include a built-in filter in the control head and redesigned interior passages for more accurate control under high flow conditions. Both types have four independent controls for adjustment of opening and closing speeds, flow control, and for manual operation in case of power failure. High temperature coils and explosionproof housings are available at slight extra cost. Made by **J. D. Gould Co.**, 4707 Massachusetts Ave., Indianapolis 18, Ind.

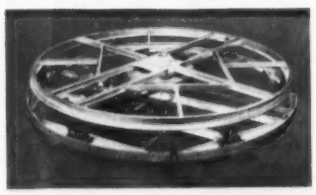
▲ For more details circle **NED-4 F9** on enclosed inquiry slip ▲

TONG TEST AMMETER
reads ac and dc up to 20 amp

Small amounts of direct current are quickly measured by clamping the tongs of the Type PB tong test ammeter around the electrical conductor. Circuit or insulation need not be broken. Primary use is for measuring 0 to 10 amp in ½-amp divisions. Instrument can also be used to read both alternating and direct current up to 20 amp. Jaws accommodate up to ½-in. diameter conductors. Two ranges are 10-0-10 amp for direct current only and 0-20 amp for both alternating and direct current. Made by **Columbia Electric Mfg. Co.**, 4519 Hamilton Ave., Cleveland 14, Ohio.

▲ For more details circle **NED-5 F9** on enclosed inquiry slip ▲

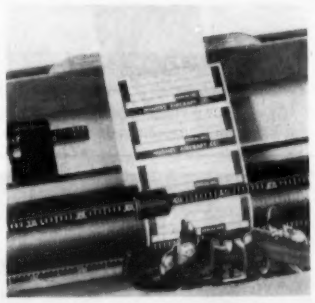
TURNTABLES
for transfer and display uses



Load carrying capacities up to 3 tons and standard sizes from 4 to 16 ft in diameter are available in line of low cost turntables for both industrial transfer and display applications. They are designed for permanent or temporary use and can be built in larger sizes and/or capacities. Built of reinforced structural steel members, units are composed of two upper circle halves, two lower circle halves, and one sprocket and center bearing assembly. One of the lower circle halves carries the turntable drive and idler sprocket. Six inverted hard rubber caster wheels support the table at its outer edge. Speed range is ½ to 5 rpm. A clutch protects the unit against jamming or other malfunction. Made by **Anchor Steel & Conveyor Co.**, 6906 Kingsley Ave., Dearborn, Mich.

▲ For more details circle **NED-6 F9** on enclosed inquiry slip ▲

ALUMINUM NAMEPLATES
information imprinted by typewriter



Sharp imbedded imprints are made on 0.003-in. thick anodized aluminum Quik-Plates by standard or electric typewriters. Furnished in strip form, nameplates can be embossed with serial and parts numbers, patent information, or product identification right on the job, then cut off with scissors. Nameplates adhere to metal, glass, plastic, wood, painted, smooth, flat, wrinkled, and curved surfaces. Self-adhesive area is protected by Blue Streak release liner. Nameplates are offered in several colors, both glossy and matte finish, which will not tarnish, peel, crack, or crumble off. They stay bonded through −62 to 325° F temperature range. Made by **W. H. Brady Co.**, 727 W. Glendale Ave., Milwaukee 9, Wis.

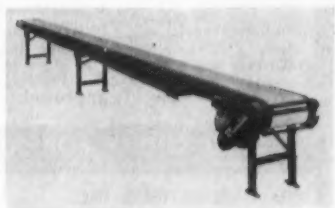
▲ For more details circle **NED-7 F9** on enclosed inquiry slip ▲

SUBMERSIBLE PUMP
top side suction prevents clogging

Any sump with a diameter of 12 in. or more can accommodate the Fig. 3880 Drainette submersible sump. Location of suction strainer in the top of the casing prevents impeller clogging from debris in the sump bottom. The ⅓-hp, 115-v, 60-cycle ac unit weighs 25 lb and is equipped with a built-in switch and attached three-prong grounding plug. Casing and base are brass, and semiopen impeller and strainer are corrosion resistant Byrite. Capacities at 10, 15, and 22 ft are 2400, 2000, 960 gph, respectively. Made by **Goulds Pumps, Inc.**, 55 Black Brook Rd., Seneca Falls, N. Y.

▲ For more details circle **NED-8 F9** on enclosed inquiry slip ▲

BELT-ON-ROLLER CONVEYOR
in 8 to 48-in. belt widths



Bags, boxes, cans, cartons, drums, and other items of various sizes and shapes are easily handled on Series 904 and 905 horizontal belt-on-roller conveyors. Series 905 is offered in ½, ¾, and 1-hp drive capacities with belt widths of 8, 10, 14, 16, 20, and 26 in. Series 905 provides drives up to 5 hp and belt widths from 12 through 48 in. in 6-in. increments. Both series have formed steel rollers on 3, 4, 6, 8, 9, or 12-in. centers. Pre-engineered lengths can be joined to make the desired unit span. Made by **Rapids-Standard Co.**, 342 Rapistan Bldg., Grand Rapids 2, Mich.

▲ For more details circle **NED-9 F9** on enclosed inquiry slip ▲

HOLD and INDEX

parts with one fixture

Makes small-part production profitable

Zagar collet indexing fixtures are adaptable to many types of machinery. Index 2 to 25 positions *and* hold parts without any movement. 1" and 2" capacities. Zagar fixtures are low, do not hinder manual movements or obstruct measuring activity. Simple, substantial, and a great saving for small parts production.

Write For Data Sheet "N-6".

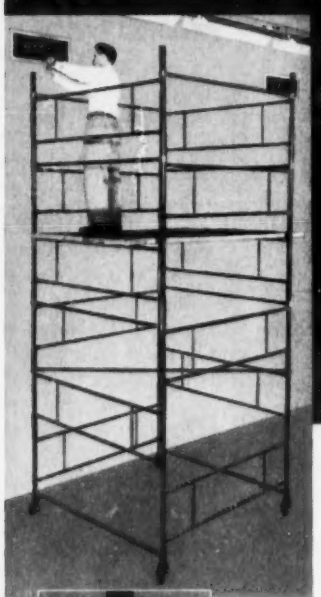
23880 LAKELAND BLVD.
CLEVELAND 23, OHIO

Zagar INCORPORATED
TOOLS FOR INDUSTRY and SPECIAL MACHINERY

▲ For more details circle NED-10 F9 on enclosed inquiry slip ▲

Cut Maintenance Costs

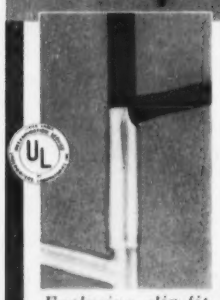
SELF-LOCK SCAFFOLDING



- FASTER
- EASIER
- SAFER

than any other system or makeshift platform

Here's the new scaffolding system that maintenance men have been looking for—the revolutionary Self-Lock System. It is specially engineered to save time, money and manpower—obsoletes old-fashioned plank and ladder arrangements.



Exclusive slip-fit joint speeds assembly. Notched frames automatically assure self-locking, self-aligning towers. Load is carried by vertical members.

- Lightweight, sturdy, tubular steel frames handle and store easily.
- Free-standing towers are strong, rigid, secure; can be erected in two-foot increments.
- No tools required. No nuts, bolts, pins or other fasteners to lose, jam or work loose.
- Casters add mobility; scaffolding can be moved easily without dismantling.
- Underwriters' Laboratories approved.

SEND TODAY FOR FULL DETAILS!

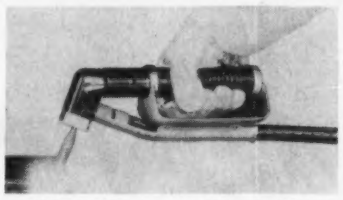
VEGA INDUSTRIES, INC.
706 E. Brighton Avenue, Syracuse 5, New York
Please send complete information on Self-Lock Scaffolding.

Company Name.....
Street.....
City..... State.....
Attention.....

VEGA INDUSTRIES, INC.

▲ For more details circle NED-11 F9 on enclosed inquiry slip ▲

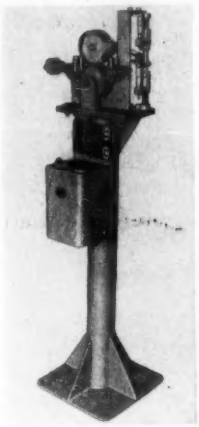
ELECTRODE HOLDER
aluminum guard protects hand



Uncomfortable heating of the Model 600 Shortstub electrode holder is minimized by bringing the cable directly to within fraction of an inch of the electrode without passing it through the handle. Operator's hand is further protected from heat radiated from the arc by an aluminum hand guard. Holder has 600-amp capacity in continuous operation, is 11 in. long, and weighs only 28 oz. It handles 1/8 through 3/8-in. electrodes and costs $14.70. Made by **Bernard Welding Equipment Co.**, 10232 South Ave. N, Chicago 17, Ill.

▲ For more details circle NED-12 F9 on enclosed inquiry slip ▲

THICKNESS GAGE
for round or flat materials



Developed to measure the diameter of wire or cable up to 1 in., this thickness gage will also measure flat material, such as paper or a similar sheet or web. Material is measured by passing it between a set of rollers. Movement of the upper roller detects variations in product size to ±0.005 in. Signal light on the electronically controlled gage indicates when maximum or minimum tolerances have been reached. Adjustable micrometers are located on the detector head. Gage can be set to control associated equipment. Made by **Wire Insulating Machinery, Inc.**, 56 Hudson St., Northboro, Mass.

▲ For more details circle NED-13 F9 on enclosed inquiry slip ▲

PEDESTAL TORQUE TOOL
used with work-holding fixture

Work is applied directly to the pedestal type torque tool which indicates the correct torque during assembly of electrical and instrumentation components. Mounted on a bench, it is generally used with a work-holding fixture. Several available models measure torque in gram-inches, ounce-inches, or pound-inches. Tool is about 5 in. high, has a cast aluminum frame, and a square drive for the customer's fixtures. A 3-in. black dial with white graduations is easily read with a double-ended pointer. Made by **Apco Mossberg Co.**, 1004 Lamb St., Attleboro, Mass.

▲ For more details circle NED-14 F9 on enclosed inquiry slip ▲

UNUSUAL BARGAINS

INDUSTRIAL ERECT IMAGE LOW POWER MICROSCOPE
5X, 10X, 20X—$80.00 Value—Only $19.95

Extremely sturdy with rack and pinion focusing, color corrected optics, turntable microscope body for inclined viewing, three different powers, long working distance under objectives, sufficient eye relief for easy viewing. Made from war surplus optical instrument so that you actually get $80.00 of value. Weighs 4 lbs., 13" high. 10-DAY FREE TRIAL! Accessory objectives available for powers of 15X, 30X, 40X.

Stock No. 70,172-AE ..... $19.95 ppd.
Order by Stock No.—Check, M.O. or Open Account—Money-back Guarantee

INDUSTRIAL STETHOSCOPE
Detects Motor Faults, Leaks

A real stethoscope at half the usual cost! Ideal for industrial plants, machine shops, auto repair. Detects hard-to-hear machine and engine faults, leakage of gas, air or fluid. Lets you listen and diagnose like a doctor! Use to check on running machinery, loose joints, poor bearings and valves, strains, leaks in piping or pumps. One application can pay for the item! Sturdy and well-made to stand hard use. Has hobby and workshop uses, too. Money-back guarantee.

Stock No. 50,223-AE ..... $2.95 ppd.
Order by Stock No. Send Check or M.O.

INFRARED NAVY SNOOPERSCOPE—War Surplus!
Govt. Cost $900—Only $39.50

Converts infrared to visible light. See in total darkness. Use in lab, factory, classroom, etc., or dismantle for fine optical parts or power source. Completely portable. Operates on two flashlight batteries. Size 11½" x 8". Weight with hard rubber carrying case 12 lbs. Image not as sharp as our $150 Sniperscope—also no infrared light source is furnished.

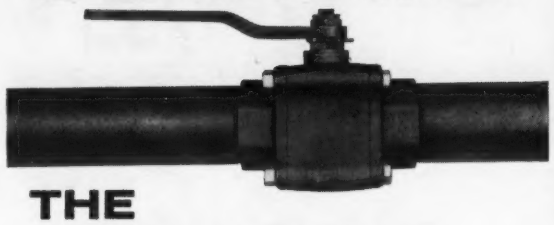
Stock No. 85,098-AE ..... $39.50 f.o.b. Barrington, N. J.
Order by Stock No.—Check, M.O. or Open Account—Money-back Guarantee

FREE! Giant CATALOG of OPTICAL BUYS!
OVER 1,000 OPTICAL ITEMS . . . Many on-the-job helps . . . quality control aids! 100 pages — hundreds of illustrations. Many war surplus bargains! Imported instruments! Lenses, Prisms, Magnifiers, Telescopes, Satellite Scopes, Microscopes, Binoculars, etc. Optics for industry, research labs, experimenters, hobbyists. No obligation. Write for FREE Catalog AE

EDMUND SCIENTIFIC CO., Barrington, N. J.

▲ For more details circle NED-15 F9 on enclosed inquiry slip ▲

COMPARE



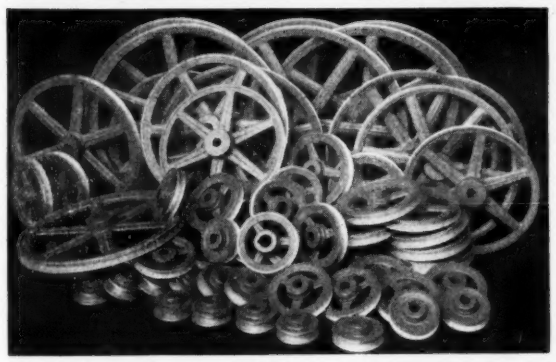
THE ECON-O-MISER BALL VALVE... with conventional GATE VALVES

The ECON-O-MISER ball valve provides smooth, round, two-way flow! Easy to service without removal from the line . . . half million cycles not unusual . . . acts as both valve and union.

For revealing facts request bulletin EB 101.

WORCESTER
VALVE CO., INC. / WORCESTER 10, MASS.

▲ For more details circle NED-16 F9 on enclosed inquiry slip ▲



BROWNING FHP SHEAVES

the most extensive line on the market!

Only Browning offers you all three kinds of sheaves: **Die Cast** for light duty, low initial cost. **Pressed Steel** for sturdy, rugged service at medium price. And **Cast Iron** for heavy duty, highest quality, greatest value; with fixed bore or Browning's famous interchangeable split taper bushing. Choose the sheave most efficient and economical for your every job from Browning's complete range of stock sizes.

Ask your Browning distributor or write us for Catalog V147.

Browning MANUFACTURING COMPANY
MAYSVILLE, KENTUCKY

▲ For more details circle NED-17 F9 on enclosed inquiry slip ▲

* Package with Confidence

New Mystik Brand Super Flextron Tape No. 6497 Has Bi-Directional Strength

An unique packaging tape. Super strength bi-directional filaments are an integral part of the product—providing equal strength in both directions. The tape is water and moisture proof. Excellent quick stick properties and it stays stuck.

TYPICAL APPLICATIONS: Strapping and holding heavy machinery parts—sealing heavy-content packages for shipment—holding loose parts in place for assembly of refrigerators and stoves—heavy banding on corrugated, fiberboard and wooden cartons—strapping tubes, rods and lumber—banding groups of cartons on pallets. Frequently replaces steel strapping.

(Conforms to Government Specifications PPP-T-97-Type 11)

Write for full information on Mystik Super Flextron No. 6497 and other Mystik brand packaging tapes.

Mystik Adhesive Products, Inc.
2635 N. Kildare Ave.,
Chicago 39, Illinois

MYSTIK BRAND TAPES SELF-STIK

PROTECTIVE COVERING MATERIALS—TAPES THAT TALK

▲ For more details circle NED-18 F9 on enclosed inquiry slip ▲

in Wheels, too...

USE DUAL ALLIED WHEELS
In Place of ONE Larger, Expensive Wheel!

Gain These Advantages:

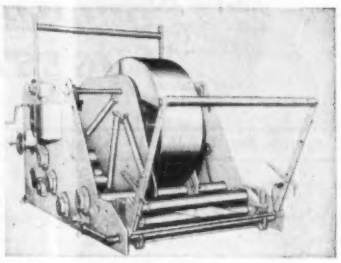
- LOWER COST—Reduce wheel cost! Buy Dual wheels for less than one single conventional type!
- GREATER FLOTATION—More tire surface on the ground. Spreads load suspension!
- EQUAL or GREATER LOAD CAPACITY—Load weight is distributed!
- BETTER TRACTION—On wet or dry surfaces; more tire gripping area!
- DESIGN DISTINCTION—More substantial appearance! Offers new design possibilities!

ALLIED

STOCK SIZES, TYPES — Or CUSTOM BUILT!
ALLIED Wheel Products, Inc.
Dept. N • 27 Broadway • Toledo 4, Ohio

For more details circle NED-19 F9 on enclosed inquiry slip

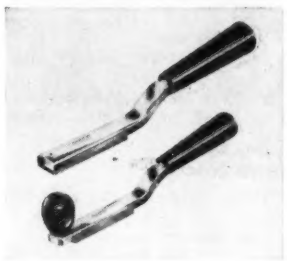
COIL CRADLES accommodate widths to 50 in.



Increased width capacity between guide plates and a reduction in over-all outside dimensions have resulted from redesign of 700 Series Koil Kradles. Tubular construction eliminates torsional frame deflection and assures bearing alignment. Single hand crank on each side simultaneously rotates all leadscrews for lateral spacing of central guide plates to accommodate any coil width capacity. Pinch rolls are standard on this series, available for coil weights up to 20,000 lb and widths to 50 in. Made by **Benchmaster Mfg. Co.**, 1835 W. Rosecrans Ave., Gardena, Calif.

For more details circle NED-22 F9 on enclosed inquiry slip

CARBIDE HAND FILES offered in two series, five cuts



Hardened die steel, glass, ceramics, plastics, spring steel, and hardened forgings are among the materials which can be filed with two series of carbide hand files. They are offered with and without a knob on the forward end and in five cuts with 16, 20, 25, 31, and 40 teeth per inch. Carbide cutting area of ¾ x 2¾ in. can be reground many times. Prices range from $11 to $13.50. Made by **Severance Tool Industries Inc.**, 761 Iowa St., Saginaw, Mich.

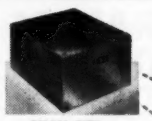
For more details circle NED-23 F9 on enclosed inquiry slip

DOUBLE-ACTION HAND PUMP handles all types of liquids

Oil, chemicals, acids, alkalies, and solvents are but a few of the liquids that are handled by this DD-1 double-action hand pump. It delivers up to 20 gpm at 110 strokes per minute. Features include positive suction and discharge valves, nylon bearings, clog preventing strainer, and ease of cleaning. Barrel and pedestal types are also available with a range of accessories including meters, hose, nozzles, and bung adapters. The double diaphragms are sealed with leakproof O-rings. Made by **Wayne Pump Co.**, Griffin Street, Ft. Wayne 4, Ind.

For more details circle NED-24 F9 on enclosed inquiry slip

The NEW Series BH100
MILLI-V-METER®



SMALL SIZE — Transistorized, servo-driven, 3x5x5¾".

ALL INCLUSIVE—Zener reference, power amplifier, servo, 144" pot.

TAPE-SLIDEWIRE — 144" long within edge of tape, on side-by-side spools.

PRINTED READOUT — Scale on tape to measure steady-state conditions or greater than 13% input deviation.

1000
DIGITAL READOUT — ACCURACY 0.1%

The INSTRUMENT with the TAPE-SLIDEWIRE

Highly accurate digital display

for LEVEL · TEMPERATURE
VOLTAGE · CURRENT · FLOW
RESISTANCE · R.P.M.
FREQUENCY · PRESSURE

100 calibrated points per foot of slidewire length.
Slidewire up to 12 feet long.
Every discrete scale unit is a calibrated point.

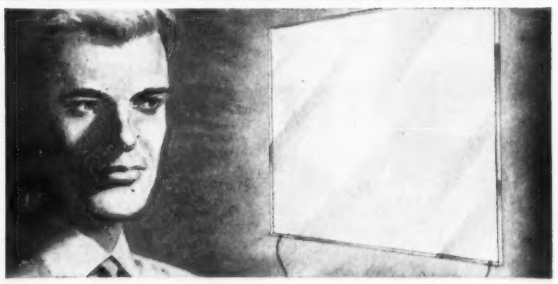
LINEAR, PARABOLIC, LOGARITHMIC FUNCTIONS
DISPLAYED IN DIRECT DIGITAL RELATION
COMPOUND RANGES, SUPPRESSED RANGES
PLUS & MINUS SCALES FROM ZERO

Full information is available for the asking!

B & H INSTRUMENT CO., INC.
3479 West Vickery Blvd. • Fort Worth 7, Texas

Sales-Engineering Offices: COMPTON, CAL., VALLEY STREAM, L.I., N.Y., DAYTON, OHIO

For more details circle NED-20 F9 on enclosed inquiry slip



This glass glows!

Lighting equipment manufacturers have developed complete electroluminescent lighting units by coating *Electrapane*® with phosphors and backing it with metal. This suggests many product design possibilities.

Basically, *Electrapane* is glass with a transparent electrical conducting film of metallic oxide on its surface. It can be used in monolithic, laminated, curved or flat form.

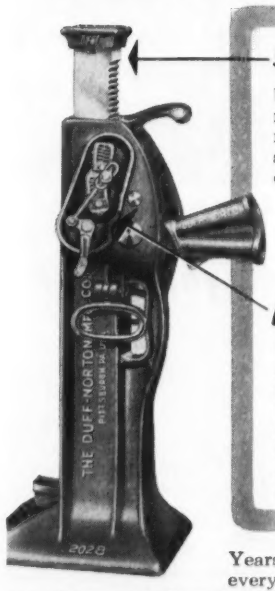
In addition to its electroluminescent potential, *Electrapane* is an excellent resistance heat source. It also acts as a radio frequency shield and, unwired, is a superior heat reflector.

Does *Electrapane* fit into your Product Development Program? Write for descriptive folder to Dept. 9269.

LOF GLASS ®
Electrapane
LIBBEY·OWENS·FORD GLASS CO.
608 Madison Avenue, Toledo 3, Ohio

For more details circle NED-21 F9 on enclosed inquiry slip

Duff-Norton Ratchet Jacks are safer...last longer



safer...
because the forged steel rack bar on Duff-Norton ratchet jacks is larger and stronger than the rack bar on any other make. Also, these jacks can not trip under load which guards men and equipment.

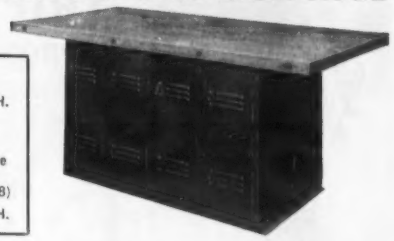
last longer...
because the exclusive spring mechanism makes maintenance easy. It can be adjusted, repaired or replaced without taking the jack apart. Tension can be tightened by the turn of a screw.

Years of hard use are built into every one of the nine models—capacities range from 5 to 20 tons. For rugged, dependable, fast lifting power at minimum cost ask your distributor for Duff-Norton Ratchet Jacks. **Duff-Norton Company, P.O. Box 1889, Pittsburgh 30, Pa.**

For more details circle NED-25 F9 on enclosed inquiry slip

STURDY
DURABLE
ECONOMICAL
locker base work benches

PARENT METAL PRODUCTS



BENCH SIZE
72" L. 24" D. 32¾" H.
TOP
1¾" Laminated Maple
LOCKER OPENINGS (8)
12" W. 21" D. 15" H.

Beat the storage problem and keep working surfaces clear with PARENT Locker Base Woodworking Benches. Eight roomy steel box lockers furnish storage space for tools, tool boxes or personal belongings. Doors equipped with spring hinges and padlock attachment or flat key rim locks which may be master keyed. Benches can be furnished with additional lockers and with tops from 5' to 12' lengths. Leg bases and cabinet bases also available. *Send for Work Benches Catalog TODAY*—and specify PARENT for your next shop equipment requirement.

PARENT METAL PRODUCTS
INCORPORATED
6801 State Road • Dept. N-10 • Philadelphia 35, Pa.

For more details circle NED-26 F9 on enclosed inquiry slip

today's most "able" HAND TYPE CLEANER by IDEAL

• VACUUMS
• BLOWS • SPRAYS
• DRIES*

HEAVY DUTY MODEL. Medium and Light Duty models also available.

Capable . . . Delivers efficient, economical, all-around service — whether you use it as a vacuum, blower, sprayer or drier*. Cast aluminum housing, streamlined and light in weight, makes possible long, continuous use without operator fatigue.

*Heater Nozzle available for Light Duty Model only.

Durable . . . Outlives lesser cleaners because it is ruggedly built to withstand the roughest industrial use. Heavy Duty 1⅓ H.P. motor, air-cooled for extra long life, blows at a velocity of 26,500 feet per minute.

Adaptable . . . Economically converts to Tank Type cleaner in less than a minute.

TANK CONVERSION PACK

Multiply the usefulness of IDEAL'S Heavy and Medium Duty Hand Type Cleaners by converting to a powerful, all-purpose STANDARD Cleaner. Conversion Pack consists of wheel-mounted 12-gallon steel tank and large dust-tight bag.

Sold Through America's Leading Distributors
In Canada: Irving Smith, Ltd., Montreal

IDEAL INDUSTRIES, Inc.
1032-F Park Avenue, Sycamore, Illinois
Please send me full catalog data on IDEAL'S Hand Type Cleaners and Conversion Packs.
Name_____
Company_____
Address_____
City_____ Zone_____ State_____

For more details circle NED-27 F9 on enclosed inquiry slip

new COMMUTATOR LATHE TRIPLES* PRODUCTION

SAVE on YOUR PRODUCTION COSTS . . .

. . . with this Commutator Lathe — built to give you precision work and increased production. It is especially designed for truing commutators and giving any desired finish.

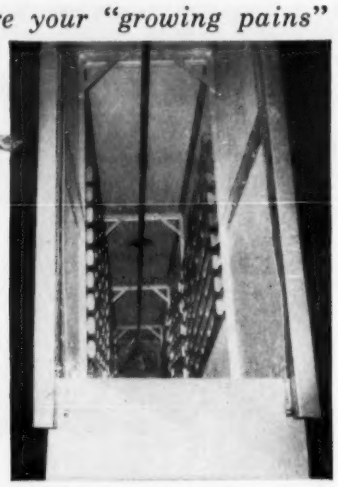
*In one week this Lathe increased production from 600 units to 2000 units over the old method of truing commutators.

Send for Catalog and Prices

NEW YORK DIAMOND TOOL COMPANY
EXCLUSIVE DISTRIBUTORS S.E.M. COMMUTATOR LATHE
360 GLENWOOD AVE. • EAST ORANGE • NEW JERSEY

▲ For more details circle NED-28 F9 on enclosed inquiry slip ▲

If heat can cure your "growing pains"



your CHROMALOX Man has the answer

From a cold start, this oven reaches operating temperatures (to 425°F) in about ten minutes. Conveyor speed is adjustable from 2 to 6 feet a minute, and baking time from 5 to 16 minutes.

By installing the oven shown above, a New England metal-working plant recently solved several problems arising from an expanded line of products.

Previously, some of the company's products had been sent out for painting and baking, while the remainder were painted and air dried at the plant. When a new, larger item was added to the product line, neither the company nor the outside firm was equipped to handle the paint baking. After considering the outside charges and delays which had caused them to lose some rush orders, it was decided to install their own oven. They then called in the Chromalox Man for a quick, economical, electrical answer.* Now, all painting and baking is done at home in a 32-foot electric radiant oven, using 42 Chromalox Type RAD Far-Infrared Heaters.

Chromalox Input Controllers accurately regulate baking temperatures for each of three heat zones. With these cycling devices, capacity can be accurately controlled from 4 to 100% of heater capacity. Top or bottom sections of each zone can be shut off to handle varying work sizes.

Chances are your Chromalox Man can help you find answers to *your* production line heating problems.

**For a detailed account of this actual case history, write for Application Report 403.*

Atlanta, Ga. TRinity 5-7244
Bala-Cynwyd, Pa. MOhawk 4-6113
Baltimore, Md. HOpkins 7-3280
Binghamton, N. Y. Phone 4-7703
Bloomfield, N. J. EDison 8-6900
Boston, Mass. LIberty 2-1941
Buffalo, N. Y. SUmmer 4000
Charlotte, N. C. EDison 4-4244 FRanklin 5-1044
Chattanooga, Tenn. AMherst 5-3862
Chicago, Ill. HArrison 7-5464
Cincinnati, Ohio TRinity 1-0605
Clearwater, Fla. Phone 3-7706
Cleveland, Ohio PRospect 1-7112
Dallas, Texas RIverside 1-9004
Davenport, Iowa Phone 6-5233
Denver, Colo. GLendale 5-3651 GEnesee 3-0821
Des Moines, Iowa CHerry 3-1203
Detroit, Mich. UNiversity 3-9100
Houston, Texas CApitol 5-0356
Indianapolis, Ind. MElrose 5-5313
Kansas City, Mo. VIctor 2-3306
Los Angeles, Calif. Richmond 7-5191
Middletown, Conn. DIamond 6-9606
Milwaukee, Wis. BRoadway 1-3021
Minneapolis, Minn. FEderal 6-3373
Nashville, Tenn. CYpress 2-7016
New York City, N. Y. WOrth 4-2990
Omaha, Nebraska ATlantic 7600
Philadelphia, Pa. GReenwood 3-4477
Pittsburgh, Pa. EMerson 1-2900
Portland, Oregon CApitol 3-4197
Richmond, Va. ATlantic 8-8758
Rochester, N. Y. HAmilton 6-2070
St. Louis, Mo. CHestnut 1-2433
San Francisco, Calif. UNderhill 1-3527
Seattle, Wash. MAin 4-7297
Syracuse, N. Y. HOward 3-2748
Wichita, Kansas AMherst 2-5647

4983

CHROMALOX Electric Heat
INDUSTRIAL • COMMERCIAL • RESIDENTIAL
EDWIN L. WIEGAND COMPANY
7509 Thomas Boulevard • Pittsburgh 8, Pa.

▲ For more details circle NED-29 F9 on enclosed inquiry slip ▲

NEW EQUIPMENT DIGEST

A PENTON PUBLICATION • PENTON BUILDING, CLEVELAND 13, OHIO

A. N. GREGG . . . . . Editor
H. J. HOLTZ . . . . . Assoc. Editor
GEO. SOTAK JR. . . . . Assoc. Editor
J. W. CLOSE . . . . Circulation Mgr.
F. O. RICE . . . . . Publisher
W. J. STAAB . . . Adv. Service Mgr.
A. BUGOSH . . . . . Sales Prom. Mgr.
E. J. MERCER . . . Adv. Prod. Mgr.

ADVERTISING REPRESENTATIVES

New York 17	B. R. BAKER, G. M. BERNARD 60 E. 42nd St.	MUrray Hill 2-2581
Philadelphia	V. W. VOLK 7 N. Drexel Ave., Havertown, Pa.	Hilltop 6-3199
Fanwood, N. J.	J. G. RIMMER, 75 Paterson Rd.	FAnwood 2-9604
Rochester 17, N. Y.	G. F. JOHNSON, 66 Charlton Rd.	Congress 6-2322
Pittsburgh 19	G. B. GUEST, 2837 Koppers Bldg.	ATlantic 1-3211
Cleveland 13	L. H. WEBER, G. B. GUEST, M. E. OLSON, GLENN A. SCHENK Penton Building	MAin 1-8260
Detroit 35	L. H. WEBER, M. E. OLSON 15800 W. McNichols Rd.	BRoadway 3-8150
Chicago 11	W. J. LOWITZ, J. M. WELLS, JOHN D. SCHIPFER, T. BYRNE O'DONNELL 520 N. Michigan Ave.	WHitehall 4-1234
Griffin, Ga.	FRED J. ALLEN, 1106 Pine Valley Rd.	Griffin 7854
Clearwater, Fla.	H. G. ROWLAND, 1954 Jeffords Dr.	Clearwater 39-9493
Dallas 35	JAMES H. CASH Room 818, Exchange Park Bank Bldg.	FLeetwood 1-4523
Los Angeles 5	ROBERT W. WALKER CO. 730 S. Western Ave.	DUnkirk 7-4388
Los Angeles 36	F. J. FULLER, 5943 W. Colgate Ave.	WEbster 1-6865
San Francisco 4	ROBERT W. WALKER CO., 57 Post St.	SUtter 1-5568

Published monthly by
THE PENTON PUBLISHING COMPANY

G. O. HAYS . . . . . Chairman
R. C. JAENKE . . . . . President
F. G. STEINEBACH . . . . . Vice Pres. and Secretary
F. O. RICE . . . . . Vice President
J. P. LIPKA . . . . . Treasurer and Asst. Secy.

Also Publisher of
STEEL • FOUNDRY • MACHINE DESIGN • AUTOMATION

New Equipment Digest is published monthly by The Penton Publishing Co., Penton Building, Cleveland 13, Ohio and is sent without cost to engineering, specifying, or buying officials of companies listed in Dun & Bradstreet as a manufacturer or processor. It is also sent free to key executives of railroad, steamship, and transportation firms. It is not sent to salesmen, representatives, or other distributors. Paid subscriptions are not accepted. Qualified men can apply for a free subscription by filling out the coupon on the inquiry slip enclosed in this issue. Accepted as Controlled Circulation Publication at Cleveland, Ohio.

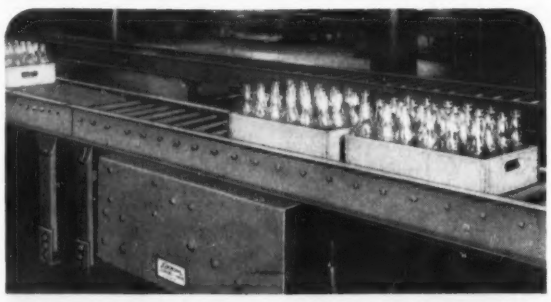
Publisher's Notice: We assume no responsibility for the validity of claims in connection with news items appearing in New Equipment Digest. Addresses are given to facilitate further inquiry.

BPA NBP

Parking Lot Layout

40-page well illustrated booklet tells "How to Layout a Parking Lot." Sketches and photos show how many cars can be parked in lots with 60-degree stalls as compared to 90 or 45-degree stalls. Automatic barrier gates, bump barriers, and dividing equipment are also described. Book points up often-forgotten considerations in lot planning and outlines modern car dimensions. It is available for $1 from Western Industries, Inc., Dept. 28, 2742 W. 36th Place, Chicago 32, Ill.

▲ For more details circle NED-30 F9 on enclosed inquiry slip ▲



Want to save $200? $500? $1000 on conveyor costs?

Like scores of other firms, *you* can make major savings by designing and installing your own Conveyor System from Logan ADAPTO UNITS. They are *stock parts*, Logan-engineered to work together efficiently. A standardized conveyor assembled from Adapto Units can be quoted quickly, shipped promptly. Write for this free booklet.

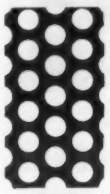
LOGAN CO., 215 CABEL ST., LOUISVILLE 6, KY.

Logan Conveyors

▲ For more details circle NED-31 F9 on enclosed inquiry slip ▲

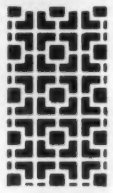
PERFORATED

METALS - PLASTICS - FIBRE BOARD



Make your selection from a large stock of standard perforating dies.

Round - Square - Slot
Perforated Grilles
Decorative Metals
Complete Decorative Panels
Screens for heavy road work
Screens for pulp and paper
Or let us design to your specifications.

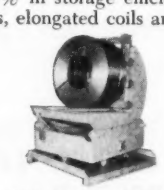


National Perforating Corporation
42 Parker Street
Clinton, Massachusetts

▲ For more details circle NED-32 F9 on enclosed inquiry slip ▲

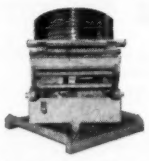
NEW TURNOVER CRADLES PALLETIZE COILS OF ANY WEIGHT IN SECONDS

You can now palletize coil loads weighing from 3000 to 40,000 pounds in 14 to 40 seconds with the portable, automatic La Deau TURNOVER CRADLE. This revolutionary Cradle lets one man handle as much material in an hour as two men usually handle in three hours! Palletizing saves 400% in storage efficiency and eliminates damaged materials, elongated coils and dangerous band breakage.



FORK SETS COILS & PALLET ON EDGE

CRADLE TIPS BACK, BASE REVOLVES



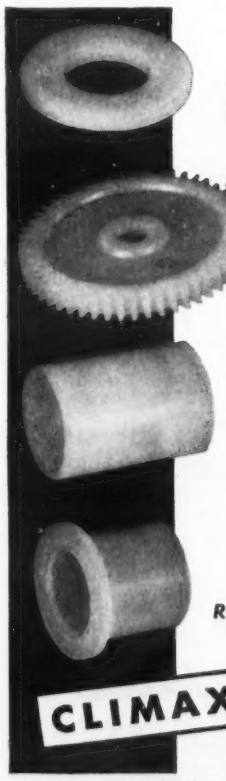
CRADLE ENDS 90° ROLLOVER, BASE FINISHES 180° TURN

PALLETIZED COILS READY TO FORK

Write today for descriptive literature

turnover cradle
A Product of La Deau Mfg. Co.
2702 San Fernando Rd., Los Angeles 65, Calif. • CApitol 2-8108

▲ For more details circle NED-33 F9 on enclosed inquiry slip ▲



. . . from stock

NYLON
BEARINGS
GEARS
WASHERS

Save time . . . reduce initial engineering development outlay and subsequent manufacturing cost by ordering from Climax' broad stock. Climax nylon power transmission parts offer striking advantages . . . including:

- high strength!
- minimum lubrication needs!
- resistant to organic solvents, alkalies, dilute acids!
- many special sizes made without tool charge!

Request new prices . . . engineering data sheets!

CLIMAX METAL PRODUCTS CO.
863 EAST 140th STREET
CLEVELAND 10, OHIO

▲ For more details circle NED-34 F9 on enclosed inquiry slip ▲

ONLY ACOUSTICA ULTRASONIC CLEANERS HAVE MULTIPOWER!

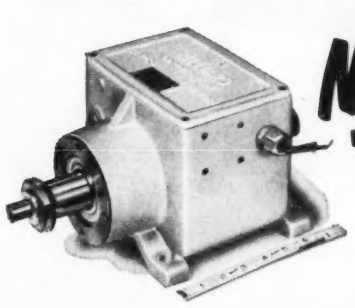
The Multipower transducer multiplies the power and efficiency of ultrasonic action. Cleaning is faster, labor costs are lower. Acoustica ultrasonic cleaners are unequaled in quality and value. Off-the-shelf in capacities from 1 to 75 gal. or custom built to 5000 gal. Expert engineers can help you with your cleaning problems.

Send for further information
Acoustica Associates, Inc., Dept. NED
Fairchild Court, Plainview, N. Y.

NEW YORK
LOS ANGELES

acoustica
LEADER IN ULTRASONIC RESEARCH

▲ For more details circle **NED-35 F9** on enclosed inquiry slip ▲



NEW "I.D.U."

HILLIARD'S Complete Package Unit that converts rotary power to precise intermittent motion...

Can be installed on existing equipment, designed into new machinery and re-used after production line changes.

Now you can get a single package unit that gives you precise control of intermittent motions . . . clip and bend . . . shear or slash . . . oscillate or repeat . . . raise or lower . . . index and position . . . from a constantly rotating source of power. The HILLIARD "I.D.U." eliminates the need of buying separate parts and assembling a special "custom" machine with assorted mechanisms to apply and control it.

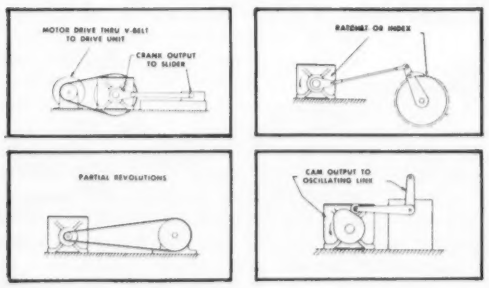
With an "I.D.U." you can mechanize hand or foot operated equipment, modernize or automate existing power operated machines and use it as a "building block" in designing or constructing new machinery or production drives.

The "I.D.U." features highly flexible control, manual, mechanical or electrical, permitting "demand" type operations in fixed or variable cycles. A protected drive, totally enclosed in an oil bath housing, it is ideal for dusty, "steamed" or "wash-down" conditions.

BASIC UNIT PRICE $289.00
Optional Accessories Extra

"Intermittent Drive Unit" contains all the parts in one package . . .

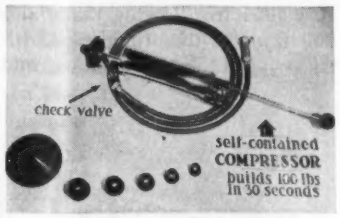
- Can be installed as easily as a motor and needs only electrical connection.
- Self-lubricating for long life of 40,000,000 or more cycles.
- Operating speed from 40 to 400 R.P.M.
- Torque capacity 36 ft. lbs.
- No cumulative error in cycling.
- Instant engagement.
- Mount with direct coupling connection or use with belt, chain or gear drive.
- *Investigate HILLIARD'S "I.D.U." for your equipment. Write on your letterhead stating your intermittent motion problems and we will provide complete information.*



THE HILLIARD Corporation
40 W. FOURTH ST., ELMIRA, N. Y.
IN CANADA: UPTON-BRADEEN-JAMES, LTD. TORONTO • MONTREAL

▲ For more details circle **NED-36 F9** on enclosed inquiry slip ▲

DRAIN LINE CLEANER
hydrostatic impact clears stoppage



Improvement in the Hydraulic Water Ram drain and sewer line cleaner facilitates building up the charge of compressed air to clear clogged lines. Stroke length of the plunger used to charge the self-contained compressor has been increased so that a charge of 100 psi can be built up in 30 sec with a few pump strokes. Hydrostatic impact, not pressure, is used to clear lines. A gage indicates pressure within the chamber. Several adapter plugs offered fit a range of drain sizes. Made by **Hydraulic Mfg. Co.**, Kiel, Wis.

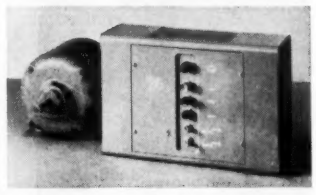
▲ For more details circle **NED-37 F9** on enclosed inquiry slip ▲

BUCKET LOADER
mounts on various tractors

Breakaway capacity of 2500 lb is built into the L-100 Series bucket loader. Model L-100S has one bucket cylinder and Model L-100D has two cylinders. Double-acting lift and bucket cylinders are standard on both models. Adapter brackets mount the loader on certain International Harvester, Allis-Chalmers, John Deere, Ford, Ferguson, Massey-Ferguson, Oliver, and Case tractors. Made by **Henry Mfg. Co.**, Box 521, Topeka, Kans.

▲ For more details circle **NED-38 F9** on enclosed inquiry slip ▲

ADJUSTABLE SPEED DRIVES
in 1/6 to 10-hp ranges



Line of adjustable speed drives includes standard duty Series 25 which covers 1/6 to ¾-hp units and the heavy-duty Series 200 which comprises 1/6 to 10 - hp units. Drives feature a magnetic amplifier unit driving thyratrons in a full-wave circuit, followed by a direct-current shunt motor. Speed ratios of 100:1 and regulation of 1 to 2 per cent are attained without tachometer feedback. Dynamic braking, reversing, jogging, remote control, torque limiting, and line voltage compensation are standard optional characteristics. Nonelectronic Series 35 covering 1/6 to 3-hp ratings with 100:1 speed ratio is offered for use where exacting speed regulation is not necessary. Made by **Cleveland Machine Controls, Inc.**, 1155 Brookpark Rd., Cleveland 9, Ohio.

▲ For more details circle **NED-39 F9** on enclosed inquiry slip ▲

DIMENSIONAIR
THE AIR GAGE THAT MEASURES

Only air gage with built-in accuracy that enables use of one master.

- **More Accurately**
- **More Dependably**
- **Faster (Greater Plug Clearance)**
- **With less maintenance cost and with less dependence on Skilled Help . . . than any other air gage you can buy.**

This is a statement we are ready to prove. Don't take our word for it. Try the Dimensionair on a no-strings-attached trial basis. For demonstration just write us: For catalog information just circle card.

FEDERAL PRODUCTS CORPORATION
9176 Eddy Street • Providence 1, R. I.

Ask FEDERAL First
FOR RECOMMENDATIONS IN MODERN GAGES . . .
Dial Indicating, Air, Electric, or Electronic — for Inspecting, Measuring, Sorting, or Automation Gaging

▲ For more details circle **NED-40 F9** on enclosed inquiry slip ▲

INTRODUCING DE-LUXE "TRI-LOCK" REVERSIBLE PLUG GAGES by DUNDICK

COMPLETE SIZE RANGE
251 sizes . . 750" to 1.000" dia in increments of .001"
HIGHEST PRECISION QUALITY
Finest Swedish-type tool steel heat treated 63-65 Rockwell "C" and stabilized. Guaranteed precision lapped tolerance plus or minus seventy millionths (.00007").
FREE STEEL CABINETS
Sturdy, rustproof protection. Included free with complete or sectional sets . . .
each Member REVERSIBLE 2 gauges for the price of one!

SENSATIONAL LOW PRICE $2.75 PER MEMBER IN ASSTD. LOTS OF FOUR OR MORE

ORDER NOW FOR PROMPT DELIVERY . . . OR WRITE FOR ADDITIONAL INFORMATION

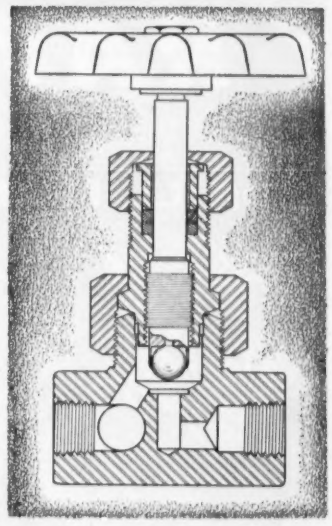
DISTRIBUTORS: A few desirable territories still open . . .

DUNDICK TOOL WORKS, INC.
"The Precision Gage for the Atom Age"
3410 West 31st Street • Chicago 23, Ill.

▲ For more details circle **NED-41 F9** on enclosed inquiry slip ▲

BALL VALVE

New Seating Surface every time valve closes



The Foxboro Ball Valve uses a retained, free-rolling stainless steel ball (instead of a disc or plug) that exposes a different seating surface every time you close it. Made of forged steel for heavy industrial liquid, gas, and steam flows. Can't leak . . . practically never wears out . . . costs little or no more than ordinary valves.

These valves handle pressures to 3000 psi. Available in globe and angle types. Two or four connections to simplify piping. ¼" general purpose size. Write for Bulletin 7-14. **The Foxboro Company, 666 Neponset Ave., Foxboro, Mass., U.S.A.**

FOXBORO INSTRUMENTATION
REG. U. S. PAT. OFF.

▲ For more details circle **NED-42 F9** on enclosed inquiry slip ▲

Aftercooler and Cyclone Separator designed for cleaner, dryer compressed air

The Adams Aftercooler and Cyclone Separator are designed to efficiently condense and remove water from compressed air and process gas. Condensed moisture and entrained dirt and oil are subsequently removed in a cyclone type separator. This unit is scientifically designed for maximum removal efficiency over a wide range of flow rates.

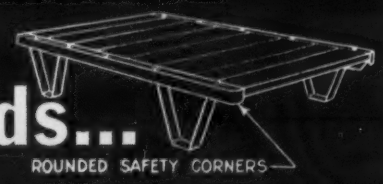
For normal use, units are available to cool gases to within 10° F of the temperature of the cooling water. Specially designed units are available to permit a 2° F approach to cooling water temperature, for application where low moisture content is critical.

Adams Aftercoolers and Separators are available from stock to handle 20 - 40,000 cfm with 10° cooling and 25 - 19,200 cfm where it is necessary to cool within 2°F of the cooling water. Special units can be supplied to suit an unlimited range of requirements. In all cases the maximum pressure loss at rated capacities is ½ psi.

This wide range of sizes enables the economical utilization of Adams Aftercoolers and Separators in virtually all industrial application. For further information on how R. P. Adams' units will solve your compressed air problems and save you money, write today for Bulletin 711. R. P. Adams Co., Inc., 227 East Park Drive, Buffalo 17, New York. *Advt.*

▲ For more details circle **NED-43 F9** on enclosed inquiry slip ▲

Ironbound



Skids...

ROUNDED SAFETY CORNERS

"Short-Haul" Skids

ONE JACK SERVES MANY SKIDS

BOUND TO BE BETTER Ironbound MATERIALS HANDLING EQUIPMENT

Write for Illustrated Catalog

IRONBOUND BOX & LUMBER COMPANY
55 HOFFMAN PLACE, HILLSIDE, N. J.

▲ For more details circle NED-44 F9 on enclosed inquiry slip ▲

RAWL

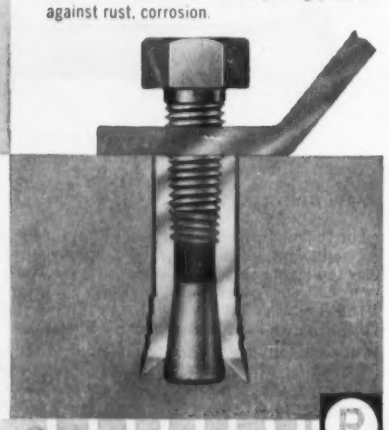
SABER-TOOTH

DRILL-N-ANCHOR

It's a drill...and drills its own hole fast, even in hard concrete, with power-operated or hand hammer. Saber-Tooth's core action drills quickly. Drill and anchor are one...matching sizes is no problem. Save the cost of special drills, the time it takes to use, store and sharpen them.

It's an anchor...and holds fast: engineering tests demonstrate holding power up to 17,860 lbs. As you drive it into hole, anchor expands over plug...holding ridges around body resist pull-out. Saber-Tooth anchor withstands severe shock and vibration...double plating protects against rust, corrosion.

Anchor anything to concrete—easily, quickly, permanently—with Saber-Tooth, sure-holding heavy-duty masonry anchor that drills its own hole.



Put steel expander plug in drill end of Saber-Tooth, drive home... anchor expands over plug, at bottom of hole for greatest holding power.

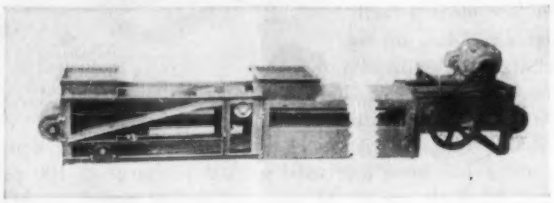
See for yourself how easily you can anchor anything to concrete ...send the coupon for free sample Saber-Tooth and full information.

THE RAWLPLUG COMPANY, INC.
250 Pelhamville Rd., New Rochelle, N. Y.
Please rush my Saber-Tooth sample and complete facts.
Name.....
Firm.....
Address.....
R9

▲ For more details circle NED-45 F9 on enclosed inquiry slip ▲

TROUGH-BELT CONVEYOR handles up to 2750 cfh

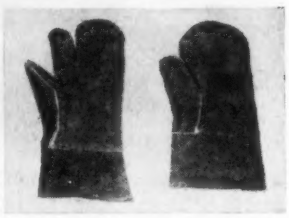
Any fine, free-flowing material is handled at speeds to 500 fpm on the troughed 12-in. belt of this Model K conveyor. It is self-cleaning, and rollerless design con-



tributes to maintenance-free operation. By using a reversible motor, material can be conveyed in either direction. Conveyors are made to any length, as well as with tail or movable hoppers, movable trippers, discharge adapters, covers, track systems for shuttle operation, and dollies for portable use. Made by Universal Hoist Co., Cedar Falls, Iowa.

▲ For more details circle NED-46 F9 on enclosed inquiry slip ▲

HEAT-RESISTANT MITTS two styles are reversible



Thermaleather heat-resistant safety mitts are made of a wooly-finished leather on the exterior side, with a 100 per cent wool liner. They remain soft and pliable, and are punctureproof. Both one-finger and full mitt styles are reversible. Made by Container Specialties, Inc., 3261 Flushing Rd., Flint, Mich.

▲ For more details circle NED-47 F9 on enclosed inquiry slip ▲

FIRE EXTINGUISHERS are pressurized wet chemical type

Pressurized 2½-gal water and 2½-gal loaded-stream wet chemical fire extinguishers are designed for self-evident operation by anyone picking the units up in a fire emergency. Discharge nozzle is simply aimed at fire, and trigger is pulled. Pressure gages of these center balanced, easy-to-carry units are recessed in handle and tell at a glance if tank is charged and ready for action. Water unit is suitable for fires in ordinary combustibles, whereas loaded-stream extinguisher can be used on flammable liquid fires as well. They are UL and Factory Mutual approved. Made by Walter Kidde & Co., 675 Main St., Belleville, 9, N. J.

▲ For more details circle NED-48 F9 on enclosed inquiry slip ▲

PREPARE FOR HOT WEATHER . . . NOW

IPCO SALT TABLETS AND DISPENSERS, FOREHEAD SWEATBANDS solve perspiration and fatigue problems in the plant or in the field. Easily installed, non-corroding plastic dispenser available with 1500-tablet supply. Washable, absorbent sponge sweatbands packed 25 to box-dispenser. Portable drinking fountain with complete accessories available for field water supply. Additional product information on request.

COMPLETE SAFETY ON THE JOB BEGINS WITH IPCO HEADWEAR, APPAREL, EYE PROTECTION AND ACCESSORY EQUIPMENT. WRITE FOR COMPLETE SAFETY PRODUCTS CATALOG.

IPCO Reg. U.S. Pat. Off. 9-902
SAFETY PRODUCTS
INDUSTRIAL PRODUCTS COMPANY
2807 N. Fourth Street • Philadelphia 33, Pa.

▲ For more details circle NED-49 F9 on enclosed inquiry slip ▲

THE NEW ADVANCE Battery Powered CONVERTAMATIC Floor Maintenance Machine cleans 50,000 sq. ft. of floor on one charge

The only Automatic with QUICK-CHANGE BATTERY PACK!

Electric, gasoline and propane models also available

The only "automatic" that can be used for scrubbing and wet pickup—or polishing and dry pickup, now available in a noiseless, fumeless, cordless, battery model. Uses four low-cost popular brand batteries. Battery pack lifts out easily. Optional second battery pack makes possible continuous operation while first pack recharges. No dismantling, no costly delay. Write today for full information. Lease and finance plans available.

ADVANCE

ADVANCE FLOOR MACHINE CO.
4102AC Washington Avenue North
Minneapolis 12, Minnesota

▲ For more details circle NED-50 F9 on enclosed inquiry slip ▲

INSPECT operating equipment

DETECT before trouble starts

PROTECT and hold output standards with WAGER INSPECTION LIGHT and/or VIEW PORT

A good idea for O.E.M! Specify Wager Inspection Light & View Port into your equipment. Make it more saleable.

You save dollars and downtime, with Wager Ovens, Dryers, Dust Collectors, Air Filters, Belt or Conveyor Housings, Storage Hoppers and prevent trouble *because you see it* before it happens!

WAGER DESIGN FEATURES:
★ Explosion & Dust Proof Light & View Port.
★ View Port Heat Resistant ½" Glass, tempered to 500° F.
★ Inspection Light can be equipped with guard for max. protection. Bulbs changed without interference to operations mounted in vibration-proof holder.
★ 8¾" of dia. required for installing Inspection Light or View Port.
★ Units mounted in aluminum frames for lightness.

Complete information available. Send for Bulletin #1469.

ROBERT H. WAGER CO.
423 Valley Street, South Orange, N. J.

▲ For more details circle NED-51 F9 on enclosed inquiry slip ▲

Photo shows plate glass pushed against resilient air-inflated wheel. Note large abrasive contact area—up to 3000% more! This means a corresponding production increase.

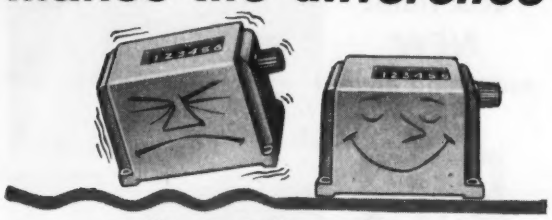
...how to INCREASE BUFFING, POLISHING PRODUCTION 3000%

• You can boost your buffing and polishing output up to 3000% on flat work . . . and 600 to 700% on contours . . . by using this resilient air-inflated wheel. Many other advantages such as — *no chatter or bounce . . . eliminates under-cuts . . . produces a straight pattern similar to a hand finish.* For use on portable tools or bench-stands—wherever ordinary polishing wheels are used. Send NOW for free literature and name of distributor nearest you.

NU-MATIC GRINDERS, INC.
8224 Carnegie Ave. RAndolph 1-0980 Cleveland 3, Ohio
DETROIT—UNIVERSITY 3-3376 • NEW YORK—Barclay 7-0196
CHICAGO—Tuxedo 9-4300
CANADIAN DISTRIBUTOR—Wm. Orlick, Ltd., Hamilton, Ontario

▲ For more details circle NED-52 F9 on enclosed inquiry slip ▲

Rectification makes the difference



- More than doubles count life
- Provides reliable operation from 25|40|50|60 cycles
- Broadens range of permissible line voltage variation

Makes possible unmatched count life of

PIC-600 electric counters

and CE-800 electric counters

and assures performance not even approached by non-rectified counters. *You can hear the difference.* See your PIC Distributor or Representative for demonstration or write

Manufacturers of Counters, Switches, Relays, Actuators and Automatic Valves
AUTOMATION CONTROLS DIVISION
GENERAL CONTROLS CO.
8066 McCormick Boulevard, Skokie, Illinois
Representatives and Distributors in Principal Cities of the United States and Canada

▲ For more details circle NED-53 F9 on enclosed inquiry slip ▲

REDUCE MAN HOURS

BOOST PRODUCTION!

A large Western manufacturer of industrial furnaces has proven again the increased production and tangible savings made possible through automation of in-process work cycles. This fully integrated Chainveyor overhead conveyor system completely eliminates intermediate handling through spray painting and baking sequences — thus cutting overhead and increasing production.

Almost every plant operation can benefit from the unusual versatility of Chainveyor systems when applied to finishing, assembly, fabricating, inspection, and overhead storage.

For helpful suggestions and applications showing how Chainveyor can work for you, send for your special Planning Folder now! It includes: Special Illustrated Catalog, Explanatory Diagrams and Grid Sheets for Preliminary Layouts.

QUALITY OVERHEAD CONVEYOR SYSTEMS
CHAINVEYOR® CORPORATION
Engineers & Manufacturers
DISTRIBUTORS IN ALL PRINCIPAL CITIES
DISTRICT SALES OFFICES • CHICAGO, DETROIT, JACKSONVILLE, NEWARK, NEW ORLEANS
MAIN OFFICES • 5618 East Washington Blvd. Los Angeles, California

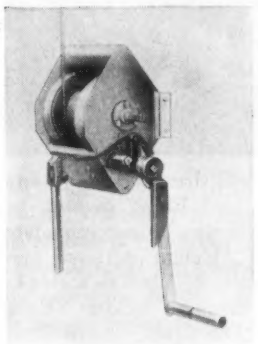
▲ For more details circle NED-54 F9 on enclosed inquiry slip ▲

SOFT-FACE HAMMER
features interchangeable tips

Safe - Grip soft - face hammer with die cast head and handle is balanced for ease of use. It has one nylon and three plastic color-coded interchangeable nonsparking tips of varying hardness. Tips attach to a "tip-bar" that floats within the hammer. The I-beam finger-grip handle prevents slipping, even with wet hands. Model 15 has a 1½-in. head diameter and weighs 1 lb; Model 205 has a 2-in. head diameter and weighs 2 lb. Made by **R. W. Hughes Industries, Inc.**, 2713 Ludelle, Ft. Worth, Tex.

▲ For more details circle NED-55 F9 on enclosed inquiry slip ▲

WINCHES
¾ and 1-ton capacities



Handbrake for safe and rapid lowering of full capacity loads, direct drive for rapid let-out and take-up of cable, and recoilless crank with automatic brake are features of Lug-All multipurpose winches. The ¾ and 1-ton capacity, portable spur gear units have steel housings and multispeed operation. Safety latch on the crank locks it on the shaft. Brackets facilitate bolting to flat surfaces or clamping to large pipes or columns. Made by **Lug-All Co.**, 355 Lancaster Ave., Haverford, Pa.

▲ For more details circle NED-56 F9 on enclosed inquiry slip ▲

WALL-HUNG WATER COOLER
13-gph unit is only 24 in. high

Compact Cordwall wall-hung electric water cooler which measures 24 in. high and 15¾ in. wide provides cooler capacity of 13 gph. Unit hangs on wall flush, semi-recessed, or recessed, without exposed brackets or plumbing. Feather - Touch accelerator handle allows operation with any part of the hand. Water flow is regular regardless of water pressure between 20 to 100 psi. Made by **Cordley & Hayes**, 443 Fourth Ave., New York 10, N. Y.

▲ For more details circle NED-57 F9 on enclosed inquiry slip ▲

SOLENOIDS
For HYDRAULIC VALVES and General Use

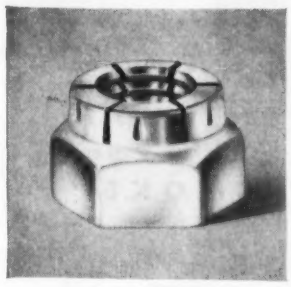
NA-703-A-2 PUSH TYPE (with loose pin)
10.5 lb. at 0.5" stroke

NA-700 LINE OF SOLENOIDS

Capacities: 0.5 lbs. at 0.5" stroke to 35 lbs. at 1" stroke.
For O.E.M, general use and replacement trade.
ALSO: Many other standard lines of solenoids.
ALSO: Reversing solenoids of all types and capacity.
ALSO: Explosion proof solenoids of all types and sizes.
ALSO: Solenoid brakes up to 24,000 ft-lbs. capacity.
ALSO: Recipromotors and Semotors.
Write for data and catalog. See SWEET'S Catalog.

TROMBETTA SOLENOID CORP.
329 NORTH MILWAUKEE STREET • MILWAUKEE 2, WISCONSIN

▲ For more details circle NED-58 F9 on enclosed inquiry slip ▲



FLEXLOC locknuts stay tight despite vibration

FLEXLOC self-locking nuts lock and stay locked wherever wrenching stops. Use them as locknuts or stop nuts . . . they will not vibrate loose. Remove and reuse them repeatedly . . . they still lock securely.

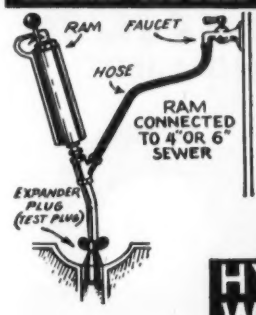
FLEXLOCs are 1-piece, all-metal fasteners requiring no auxiliary locking elements. No lockwashers, jam nuts or cotter pins. Nothing extra to put together, come apart or get lost. And no nonmetallic inserts to come out, deteriorate, or be chewed up by rough bolt threads. Each thread carries its share of the load.

Because they require no separate locking devices, FLEXLOCs facilitate design and specification, simplify inventory and handling, save assembly time and costs. For complete information, see your authorized SPS distributor. Or write direct for new Bulletin 866.

INDUSTRIAL FASTENER Division SPS
JENKINTOWN 24, PENNSYLVANIA

▲ For more details circle NED-59 F9 on enclosed inquiry slip ▲

CLEARS CLOGGED DRAINS in Seconds!



The ideal plumbing service tool. Can pay for itself in one application!

Smashes through the most stubborn blockages, then flushes clean — all in one operation!

Comes equipped with self-contained manual compressor (can charge Ram to 100 lbs. in 30 seconds!) and drain adaptors in 6 sizes!

HYDRAULIC WATER RAM

Anyone can operate it! Thousands already in use, have saved *millions* of dollars in industry and institutions. Why lose time, suffer inconvenience, waste dollars needlessly on either completely blocked or slow-moving sewers, drains, fixtures? The HYDRAULIC WATER RAM clears severest stoppages with SPLIT-SECOND HYDROSTATIC IMPACT! . . . Shatters blockage, then flushes clean. No snakes, chemicals, cables. No pushing through. Works perfectly, *vent or no vent!* Nothing to wear out. You risk nothing on our 30 day free trial offer, at our expense. Write for details.

Works perfectly with all clogged fixtures, toilets, sinks, urinals, etc. Equipped with 4" rubber cone, ideal for toilets, *plus* set of 5 tapered adaptor plugs for other drains or sewers.

Write for Information, Prices, Free Trial Offer — Today!
HYDRAULIC MANUFACTURING CO.
214 INDUSTRIAL HEIGHTS KIEL, WISCONSIN

▲ For more details circle NED-60 F9 on enclosed inquiry slip ▲

"LOOK-A-LIKES"

ROOFING & SIDING FASTENERS

ONLY GENUINE **TOPSEAL*** FASTENERS — WITH BONDED, LEAK-PROOF **WEATH-R-SEAL®** WASHERS — OUT-PERFORM ALL OTHER "LOOK-A-LIKES" FOR QUALITY — SERVICE — PERFORMANCE

*Trademark

Write for "FASTENER FACTS"

"There's only ONE TOPSEAL"

Pat. and Pats. Pend.

FABCO

FABRICATED PRODUCTS CO. WEST NEWTON, PENNA.

▲ For more details circle NED-61 F9 on enclosed inquiry slip ▲

BREATHE EASIER...

Double filters provide comfortable breathing. Soft rubber face mask gives air-tight fit. Sanitary face cloth protects against dermatitis or chafing. Patented exhalation valve guards against re-breathing stale air.

Cover scientifically designed respirators have been adopted as standard equipment by industries the world over. Free literature on request describing models for every purpose. See your safety equipment supplier or order sample direct. Model shown—only $2.00 postpaid.

H. S. COVER
Dept. 605, South Bend 14, Ind.
"Respirators for Industry Since 1894"

▲ For more details circle NED-62 F9 on enclosed inquiry slip ▲

Hammerlok®
COUPLING LINK

MAKE UP YOUR OWN HERC-ALLOY SLINGS. No more waiting for new or repaired assemblies to reach you from the factory.

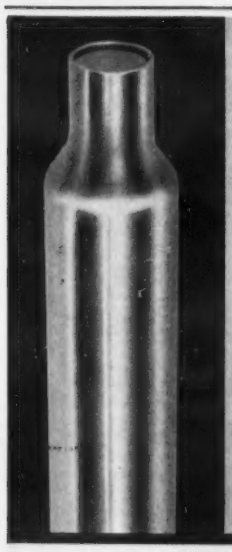
- No peening or welding
- Anybody can assemble
- Stronger than Herc-Alloy chain
- Thoroughly field tested
- Re-useable and SAFE

Write for Bulletin and name of your CM Distributor stocking Herc-Alloy chain, master links, hooks and Hammerlok coupling links.

CM CHAIN

COLUMBUS McKINNON CHAIN CORP.
TONAWANDA, NEW YORK
NEW YORK • CHICAGO • CLEVELAND
SAN FRANCISCO • LOS ANGELES
In Canada: McKinnon Columbus Chain Ltd., St. Catharines, Ont.
HERC-ALLOY®

▲ For more details circle NED-63 F9 on enclosed inquiry slip ▲



CLOSING THE ENDS OF TUBE?

the Wolverine Spun End Process† Can Help You

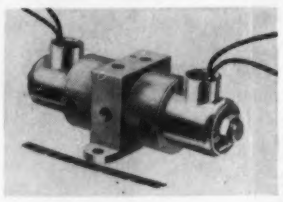
Write

WOLVERINE TUBE
DIVISION OF
CALUMET & HECLA, INC.
17270 Southfield Road
Allen Park, Michigan
Manufacturers of Quality Controlled Tubing and Extruded Aluminum Shapes

†A patented process RE 22465

▲ For more details circle NED-64 F9 on enclosed inquiry slip ▲

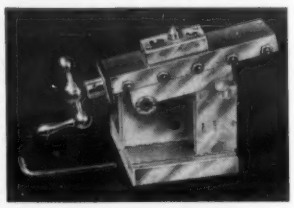
SOLENOID VALVE
four-way type for service to 300 psi



Life expectancy in the millions of cycles is reported for four-way solenoid valves which are offered with coils for practically any voltage, current, or service. They are usable on 0 to 300 psi with 1/8-in. orifice or 0 to 90 psi in 3/16-in. size. Sealed coils, adjustable flow control, and manual over-ride are features. They can be bottom drilled for manifolding or tapped for 1/8 or 1/4-in. fittings. Made by **Airmatic Valve, Inc.**, 7317 Associate Ave., Cleveland 9, Ohio.

▲ For more details circle NED-65 F9 on enclosed inquiry slip ▲

DIAMOND HOLDER BLOCK
for dressing grinding wheels



This diamond holder block for dressing grinding wheels has 2 in. of travel and is moved across grinding wheel by a smooth screw feed actuated by a hand knob. It can be adjusted beyond 45 degrees, up or down, and will dress wheels to any desired angle within 0.0003 in. Block mounts in two positions and has three hole sizes to accommodate standard diamond mountings. Height without diamond is 4 7/8 in. Dresser can also be used as a checking fixture by removing the diamond holder. Price is $195 from **Manting Tool & Die Corp.**, Matco Div., Morley, Mich.

▲ For more details circle NED-66 F9 on enclosed inquiry slip ▲

INDUSTRIAL PNEUMATIC TIRE
reinforced with steel fibers

Thousands of short steel fibers reinforced this U. S. Royal S.R.T. Grip-Matic industrial pneumatic tire to protect tread and sidewalls against cuts, ruptures, and punctures. The hardened steel filaments form a dense mat between the cord body and the tread and full sidewall areas of the tire. The metal fibers are closely interlaced, but individually insulated. Tire features symmetrical lug tread design for straight line traction. It is made with rayon cord in 6.00/6.90 - 9, 7.00 - 12, 7.50 - 10, and 7.50 - 15 sizes. All are 10 ply except the 7.00 - 12, which has a 12-ply rating. Made by **United States Rubber Co.**, Rockefeller Center, New York 20, N. Y.

▲ For more details circle NED-67 F9 on enclosed inquiry slip ▲

Only BUSCHMAN *has it!*

IN-STOCK *delivery on a* **COMPLETE** *range of roller & wheel conveyors*

Available for light use, medium & heavy duty

LIGHT—#138 Rollers. Rust resistant. For low cost carton handling. 12" to 18" widths.
MEDIUM—Aluminum, steel; wheel or roller. QUICK-EEZ couplings. 12", 15" & 18" widths.
HEAVY—#190 Rollers. High capacity handling. 15", 19" & 25" widths.

Write today for literature.

Every Way Better EWB

THE E. W. BUSCHMAN CO.
4482 Clifton Avenue, Cincinnati 32, Ohio
C-356-EWB

CONVEYORS FOR EVERY INDUSTRY

▲ For more details circle NED-68 F9 on enclosed inquiry slip ▲

NEW safety for dock traffic
NEW operating ease
NEW
RITE-HITE

manually operated MECHANICAL RAMP

New dynamic counterweight suspension of this Rite-Hite Model 72 eliminates the need for a ramp platform control lever. Where Model 72 is equipped with Rite-Hite's exclusive horizontal adjustment, the adjustment lever lies below dock surface when not in use. Thus, no levers protrude above the dock floor to impede traffic or endanger handling equipment and personnel.

Rite-Hite dynamic counterweighting also makes it possible to actuate the ramp platform with almost effortless ease. The platform practically "floats" to up or down positions.

A new positive, adjustable locking mechanism locks the ramp platform level with the dock surface when desired, permitting dock traffic up to the ramp's rated capacity to travel across it freely. Available for Model 72 ramps purchased without the Rite-Hite horizontal adjustment feature.

For full details on this new Model 72 — and any other of the complete line of manually operated and truck-actuated Rite-Hite Ramps, all of 10 ton capacity — write today, Dept. N-69

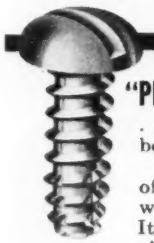
RITE-HITE DIVISION
LOOMIS MACHINE COMPANY
133 EAST FOURTH STREET, CLARE, MICHIGAN

▲ For more details circle NED-69 F9 on enclosed inquiry slip ▲

3 New, Improved Thread-Cutting Screws from Parker-Kalon!

Whatever the material, whatever the requirements, there's a new, improved P-K thread-cutting screw that's just right for your application. The five cutting flutes on the new, improved P-K Type "F" and "BF" reduce pressure development by 80 percent! The completely formed threads on these screws have sharper cutting edges, fully formed threads and 5 deep flutes that are of continuous depth. These features make for better clearance of the accumulated material and assure minimum stresses in driving and avoid the possibility of stripping or galling.

New, Improved P-K® Type F* . . . Ideal for friable, granular, or brittle material. For ferrous or non-ferrous castings, bronze or brass forgings, heavy gage sheet metals, structural steel, plastics, or resin-impregnated plywood.



"PENTAP" the New, Improved P-K Type B-F*
. . . For comparatively thin sections and bosses in friable and brittle plastics.
Combines the five thread-cutting flutes of the Type F screw with the coarse pitch, widely-spaced threads of the P-K Type B. It distributes cutting pressure evenly, lets chips drop to the bottom of the hole, prevents cracking of the material.

The New P-K Type L† A completely new and improved tapping screw developed for use in Nylon. Functions as a combination thread-cutting and thread-forming screw, cutting a small amount of the Nylon to allow the full diameter threads to form. Offers a particular advantage in Nylon assemblies which must be disassembled for service, because *it can be readily removed and replaced without stripping or galling.*

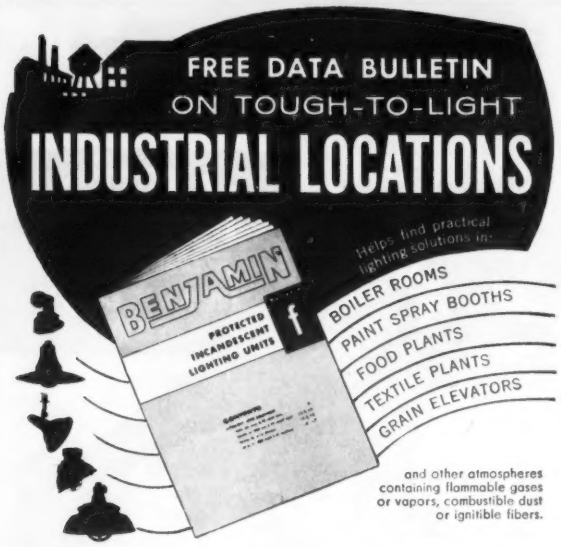
And don't forget . . . P-K can provide all types of SEMS and Pre-assembled Fastener-Washer Combinations. Send for your FREE Test-Pak of P-K Sems and new, improved Thread-cutting Screws Today!

PARKER-KALON®
fasteners

PARKER-KALON DIVISION, General American Transportation Corporation, Clifton, New Jersey • Offices and warehouses in Chicago and Los Angeles.

*Patent Pending †U.S. Patent 2,350,346

▲ For more details circle NED-70 F9 on enclosed inquiry slip ▲



If you are concerned with the lighting of so-called "hazardous locations,"* send for this 20-page illustrated bulletin on Benjamin Protected Incandescent Lighting Units. It's a handy reference to help you find practical solutions for tough-to-light industrial locations. For your copy write:

Benjamin Electric Mfg. Co.
SUBSIDIARY OF THOMAS INDUSTRIES INC.
Dept. W, Des Plaines, Ill.

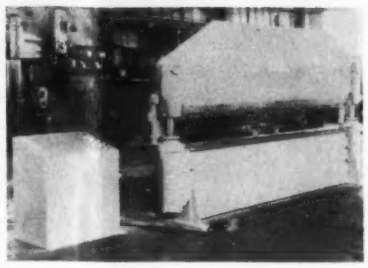
208R

*Classified by National Electrical Code into Class I, II and III.

BENJAMIN ...always the source of good lighting
COMMERCIAL and Industrial

▲ For more details circle NED-71 F9 on enclosed inquiry slip ▲

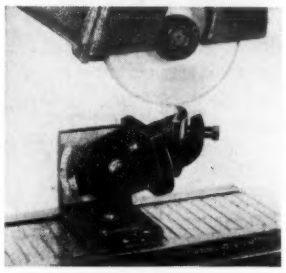
HYDRAULIC PRESS BRAKE
60-ton unit accurate to thousandths



Separate housing for motors and hydraulic controls is featured by this 60-ton hydraulic press brake. Cylinders are positioned at the base of the brake and pull the ram down. Level control system assures accuracy within thousandths of an inch. Control is by foot pedal placed in a convenient position. Made by **Pacific Industrial Mfg. Co.**, 848 49th Ave., Oakland 1, Calif.

▲ For more details circle NED-74 F9 on enclosed inquiry slip ▲

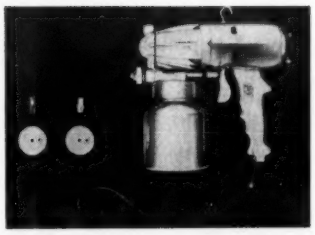
GUN DRILL SHARPENER
for detachable or brazed-on types



Drill diameters to 1½ in. can be sharpened on this fixture for detachable or brazed-on gun drill heads. Point angles from 0 to 45 degrees and relief angles up to 20 degrees can be ground by simple adjustment. Each fixture has long and short locating blocks for 110 - degree flute angle and long and short blocks for 113-degree flute angle. The cast steel fixture has flat ground mounting surfaces and can be mounted by magnetic chucking, bolting, or clamping. Made by **National Twist Drill & Tool Co.**, National Square, Rochester, Mich.

▲ For more details circle NED-75 F9 on enclosed inquiry slip ▲

SPRAY GUN
self-contained unit weighs 4 lb



Bevel gear driven by a nylon bevel pinion contributes to the long life of Model J Payswell multipurpose spray gun. The self - contained compressor type unit weighs just over 4 lb. Gun weight is so balanced that the liquid in the canister counterbalances the weight of the motor. Complete Spray-Pak weighs 14 lb and includes a spare aluminum canister, cover, three interchangeable nozzles, respirator, can of oil, air filters, special wrench, carrying case, and operating instructions. Complete unit costs $59.95, and gun only is $49.95. Previous models can be converted to the new gearing for $14.50. Made by **Sellco Corp.**, 224 W. Seventh St., St. Paul 2, Minn.

▲ For more details circle NED-76 F9 on enclosed inquiry slip ▲

234

THE UNITED STATES GRAPHITE COMPANY
DIVISION OF THE WICKES CORPORATION • SAGINAW 10, MICHIGAN

▲ For more details circle NED-78 F9 on enclosed inquiry slip ▲

If you want a simple, compact, infinitely variable speed drive for...

agitators
boring mills
centrifuges
conveyors
cut-off machines
experimental equipment
fatigue testing machines
feed screws
gear pumps
index mechanisms
knitting machinery
laboratory equipment
lathes
metering pumps
mixers
packaging machines
paper machines
pill extruders
plastic machinery
rotating drums
spectrometers
spring making machines
textile process machines
timing switches
transfer machines
vibration testers
washers
welding machines
winding devices
wire drawing machines
yarn rolls
or any one of hundreds of other devices requiring variable speed control

WRITE FOR BULLETIN K-200 FOR FULL INFORMATION ON THE NEW CLEVELAND SPEED VARIATOR

It's quiet, efficient, economical. No belts or complicated linkage. Instant speed change by manual, automatic or remote control.

THE CLEVELAND WORM & GEAR COMPANY
Speed Variator Division, 3283 E. 80th St., Cleveland 4, Ohio
Subsidiary of Eaton Manufacturing Company

▲ For more details circle NED-72 F9 on enclosed inquiry slip ▲

CM Lodestar®

electric hoist

LODESTAR FEATURES INCLUDE:
- Safe, heavy duty performance
- Self-adjusting magnetic brake
- Ultra-modern electric braking
- CM-ALLOY flexible link chain

NEW... Larger capacity and higher speed models in 1/2, 1 and 2 tons for faster, lower cost materials handling.

NOW... Greater selection from a complete range of capacities and speeds...1/8 to 2 tons and 8 to 60 fpm.

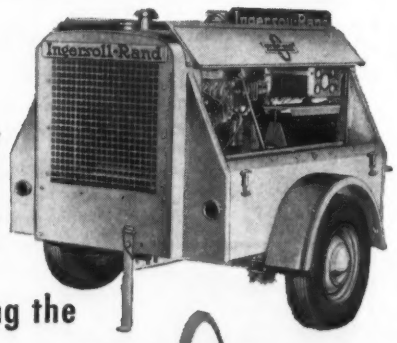
REQUEST CATALOG AND NAME OF LOCAL STOCKING DISTRIBUTOR

CM HOISTS

CHISHOLM-MOORE HOIST DIVISION
Columbus McKinnon Chain Corporation
TONAWANDA, N. Y.
NEW YORK • CHICAGO • CLEVELAND
In Canada:
McKinnon Columbus Chain Ltd., St. Catharines, Ont.

▲ For more details circle NED-79 F9 on enclosed inquiry slip ▲

ALL NEW



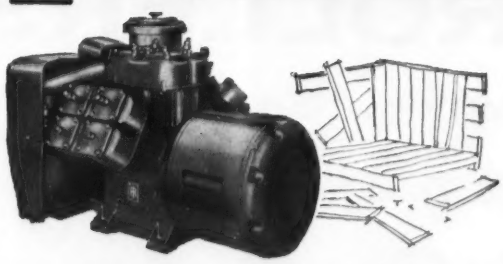
presenting the
125-cfm GYRO-FLO
Now better than ever

Smaller and more compact than the original Gyro-Flo 125, this new unit incorporates a host of new features including...simplified, more-efficient compressor system ...larger, slower-speed engines (1800-rpm) . . . 60" track...full-length tool boxes with more storage capacity ...fuel and air tanks under lockable cover...automatic cylinder oil drainage when unit is shut down...easy inspection of all rotor vanes. The new Gyro-Flo 125 is powered by 1800-rpm Continental engines—either gasoline or diesel. Ask your Ingersoll-Rand representative for complete details or send today for a copy of Form 2930.

Ingersoll-Rand
2-960 11 Broadway, New York 4, N. Y.

▲ For more details circle NED-73 F9 on enclosed inquiry slip ▲

AIR COMPRESSORS



SHIPPED READY-TO-RUN, Ingersoll-Rand Type 40 air-cooled compressors require connection of only discharge piping and power lines to put them into service. Because of excellent running balance, these compact units require no special foundation and they can be easily relocated.

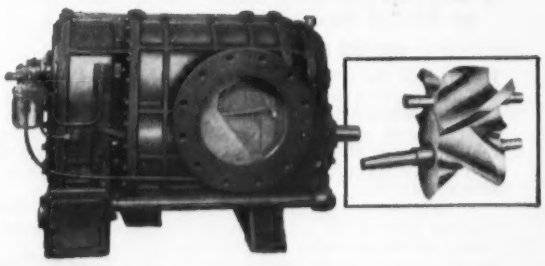
Two-stage compression with intercooling to near-ambient temperatures keeps compression efficiency high. Dust-tight construction, filtered air intake, and I-R Channel Valves keep maintenance low. Available from 25 hp to 125 hp, from 80 psi to 200 psi discharge pressures. For complete description, send for Form 3166-F.

Ingersoll-Rand Dept. P4
1-605 11 Broadway, New York 4, N. Y.

OVER 1000 COMPRESSOR TYPES & SIZES...FROM 1/4 TO 6000 HORSEPOWER

▲ For more details circle NED-77 F9 on enclosed inquiry slip ▲

AXI-COMPRESSORS



AIR, GAS OR VAPOR PROBLEMS?

If you are interested in compressor efficiency for handling air, gas or vapor, investigate the I-R AXI-COMPRESSOR line. With unique axial-flow cycloidal design, the rotors never touch . . . need no internal lubrication . . . deliver oil-free air. More air with less power consumption. Sizes range from 100 cfm to 15,000 cfm, for vacuums to 25 inches, pressures to 15 psi. Details in Bulletin 11,001.

Ingersoll-Rand
17-662 11 Broadway, New York 4, N. Y.

Over 1000 types and sizes of I-R compressors... 1/4 to 6000 hp.

▲ For more details circle NED-80 F9 on enclosed inquiry slip ▲

New GEMCO ROTATING CAM LIMIT SWITCH

PRECISION CAM ADJUSTMENT WITH A SCREW DRIVER . . . IN SECONDS!

One type cam . . . no special cam lobes required.

Snap Action Switches, N. O. and N. C.—electrically separated

2 through 12 circuits. Available in NEMA 1, 4, 5, 7, 9 and 12 enclosures.

Please send Bulletin 558 for complete story of new Gemco Rotating Cam Limit Switches.

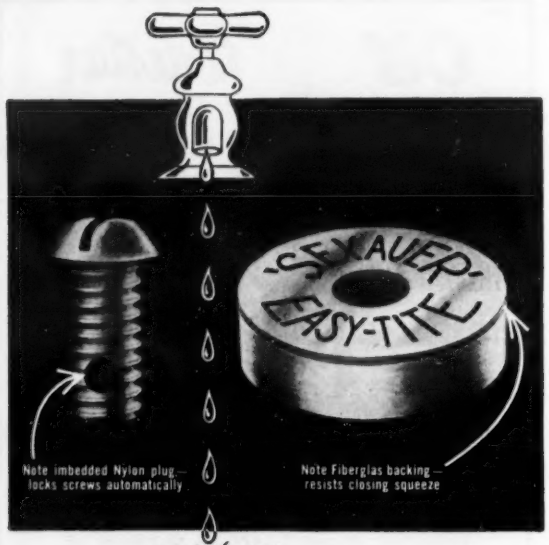
NAME _____

COMPANY _____

CITY _____ ZONE _____ STATE _____

GEMCO ELECTRIC COMPANY
25685 West Eight Mile, Detroit 40, Mich.

▲ For more details circle NED-85 F9 on enclosed inquiry slip ▲



New Way to Stop Faucet Leaks!

★ 9-in-10 washers are fastened with TOO LONG or SHORT SCREWS thus loosen and destroy themselves. Leaks quickly follow!

34 YEARS OF RESEARCH REVEALS NEW SOLUTION

★ New, patented 'Sexauer' SELF-LOCK screws have imbedded expanding NYLON PLUG. They lock at required depth AUTOMATICALLY, hold washers firmly! Made of MONEL, they are rustproof, non-corroding. Heads can't twist off. Screw slots can't distort.

★ NEW, improved 'SEXAUER' EASY-TITE faucet washers are made of super-tough, pliable du Pont compound (not rubber or fibre). Reinforced with a vulcanized layer of Fiberglas, they resist distortion and splitting from shut-off grind and squeeze.

★ Faucet leaks repaired with 'Sexauer' EASY-TITE faucet washers and SELF-LOCK screws outlast ordinary repairs "6-to-1"!

HIDDEN COSTS OF FAUCET LEAKS!

Hackensack, N. J. Water Co. and American Gas Association figures prove stopping just ONE PIN-HOLE SIZE (1/32") LEAK saves you 8,000 gal. water quarterly. A HOT WATER FAUCET LEAK repair saves you over $7.58 QUARTERLY in fuel and water bills. Fewer leaks also produce important savings on MATERIALS, LABOR and COSTLY FIXTURE REPLACEMENTS!

A 'Sexauer' Technician will make available our NEW Catalog, Edition "J", listing our entire line of over 3,000 TRIPLE-WEAR plumbing repair parts and tools. He will survey your fixtures, determine the repair parts needed and establish an efficient stock arrangement and control to prevent costly overstocking or shortages. You get this service without obligation. *Act now!*

J. A. Sexauer Mfg. Co., Inc., Dept. AU-69
2503-05 Third Ave., New York 51, N.Y.
Please send me a copy of your NEW Catalog "J"

Name _____ Title _____

Organization _____

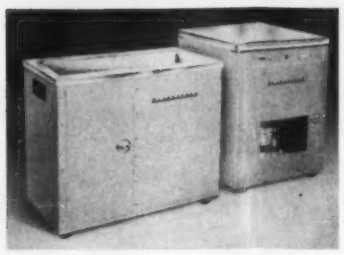
Bus. Address _____

City _____ Zone _____ State _____

SEXAUER
WORLD'S LEADING SPECIALISTS IN PLUMBING AND HEATING REPAIR PARTS

▲ For more details circle NED-86 F9 on enclosed inquiry slip ▲

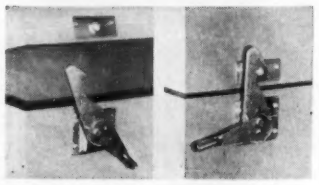
ULTRASONIC CLEANER
temperature can range to 400° F



Custom - built stainless steel cleaning tanks are used with this Model GW-8 ultrasonic cleaning unit. Separate electronic generator powers four air-cooled multiple-element transducers made up of over 1000 magnetostrictive strips which operate at 20 kc in the tank. Illustrated tank measures 30 x 12 x 12 in. Solvents can be used at temperatures up to 400° F. Transducer will not overheat flammable or toxic solvents. Made by **Blackstone Corp,.** 1111 Allen St., Jamestown, N. Y.

▲ For more details circle NED-87 F9 on enclosed inquiry slip ▲

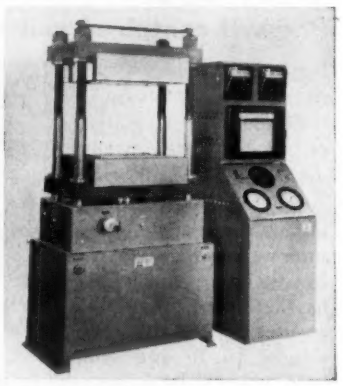
LATCHING DEVICE
provides 200-lb closing pressure



With standard operating lever, the Hook-Lock will positively lock military cases and commercial containers with 200 - lb closing pressure. Modified levers have even greater pull-down pressure. Load-carrying capacity is 750 lb. Device lies flat against the container whether open or closed, and at its thickest point, extends only 7/16 in. from container surface. It is shockproof and will withstand direct high-impact blows. Made by **Simmons Fastener Corp.**, N. Broadway, Albany 1, N. Y.

▲ For more details circle NED-88 F9 on enclosed inquiry slip ▲

PLATEN PRESS
sustains temperatures up to 1500° F

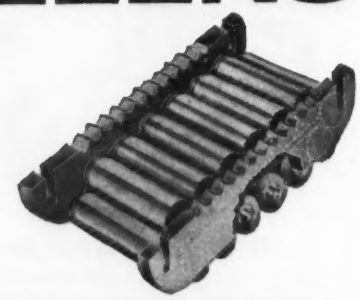


Production molding as well as research and development are typical applications for this high temperature platen press which will sustain platen temperatures up to 1500° F. The electrically heated platens are insulated so that press frame remains cold while platens glow a bright orange. Press has 50-ton ram force, 6-in. stroke, and 6 to 18-in. daylight opening. Platen sizes range from 8 to 24 in. square. Made by **Pasadena Hydraulics, Inc.**, 1433 Lidcombe, El Monte, Calif.

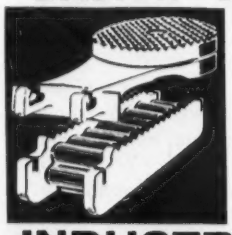
▲ For more details circle NED-89 F9 on enclosed inquiry slip ▲

EXPRESS ROLLERS

MOVE 30 Tons for $200



EASIER - SAFER - FASTER



Don't Slide It, Roll It! Cut down machinery moving time to minutes with a set of Express Rollers. Rugged; compact; for tight places. Complete Folder shows recommended set for loads from 2-150 tons; prices; turning attachments; accessories. SEND FOR FREE LITERATURE TODAY!

INDUSTRIAL EAST CO.
P. O. 561, Clifton 4, New Jersey
Our Catalog may be found in Sweet's Plant Engineering File, '59

▲ For more details circle NED-90 F9 on enclosed inquiry slip ▲

Start where you please— SAW with ease . . .

Zips through aluminum, Fiberglas, plastics, plastic laminates, even 16-gauge steel with minimum effort, maximum speed. Its performance is outstanding on metal laminates such as Mirawal, Metalwal, Met-L-Wood and Amorply.

- Rugged 2-in. diameter saw blades give full 3/8" depth of cut.
- Powered with heavy-duty industrial-type 110 volt AC/DC portable 5/16" capacity electric drill motor. Ball bearing equipped drive for smoother operation.
- Leaves accurate, smooth milled edge that requires no sanding or finishing.

Write for Catalog E-42

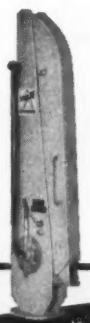
THE KETT TOOL COMPANY
5051 Madison Road
Cincinnati 27, Ohio

▲ For more details circle NED-91 F9 on enclosed inquiry slip ▲

Here's "Finger Tip" Power That Speeds Lifting Jobs THREE FOLD!

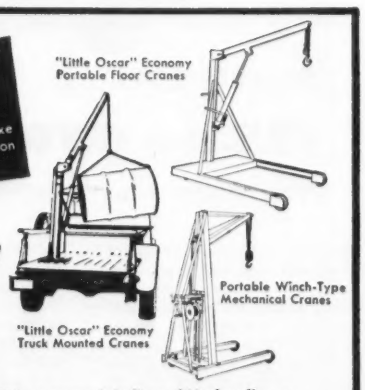
Available in Half-ton, One-ton and Two-ton capacity

Get effortless lifting of full-capacity loads with a forward movement of this handle. Move it back and the load is lowered just as easily.



- ★ Three to five times faster than hand operated pumps
- ★ Powered with standard 6 or 12 volt pump
- ★ High efficiency pump assures low battery drain
- ★ Easy portability
- ★ Telescoping extension boom
- ★ Rugged, unbendable, box-type construction
- ★ Hydraulic lines are fully protected
- ★ Built-in safety by-pass valve prevents overloading

Converts to truck-mounted or dock-mounted crane in minutes.
Boom folds up to take least possible space on truck deck.



Hitch your Lifting Problems to a STAR Crane

STAR builds a complete line of Hydraulic, Hydraulic-Electric and Mechanical Cranes.

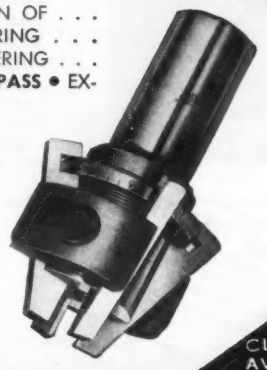
Write for Complete Catalog Information

STAR MACHINE AND TOOL CO.
MINNEAPOLIS 14, MINNESOTA, U.S.A.

▲ For more details circle NED-92 F9 on enclosed inquiry slip ▲

KUTMORE ADJUSTABLE HOLLOW MILLS

Get Speed! Get Precision!



• ANY COMBINATION OF . . . TURNING . . . TAPERING . . . FACING . . . CHAMFERING . . . TREPANNING IN **ONE PASS** • EXCLUSIVE **MICROMETER** ADJUSTMENT FEATURE FOR RAPID SET-UP • CUTTING CAPACITIES FROM 1/32" TO 2" DIAMETER IN STANDARD STOCK.

Our Engineering Department is at your disposal on your Hollow Mill problems.

1625 CLINTON AVE. NO.

CARL WIRTH & SON, INC.

ROCHESTER 5, N.Y.

Write For Catalog 20NE

▲ For more details circle **NED-93 F9** on enclosed inquiry slip ▲

When You Do It Yourself WITH TEFLON*

Start with

Chemlon® *The Best in Teflon*

Getting the full advantages of this material depends on the processing ability of your supplier to meet *all* of these qualifications:

1. **Fabricating experience, facilities and rigid quality control to supply a uniform, non-porous Teflon, free from flaws, thus eliminating rejects or malfunction of your end product.**
2. **Dimensional accuracy—carefully sized to industry specifications. Any waste of Teflon adds to its cost, and corrective finishing in your own shop unnecessarily adds production time and expense.**

Under the name, Chemlon, "John Crane" gives you full satisfaction on each of these points, plus engineering assistance.

Ask about your specific needs. Request Bulletins T-110 and T-122. Crane Packing Co., 6411 Oakton Street, Morton Grove, Illinois, *(Chicago Suburb).*
In Canada: Crane Packing Co., Ltd., Hamilton, Ont.

***DuPont Trademark**

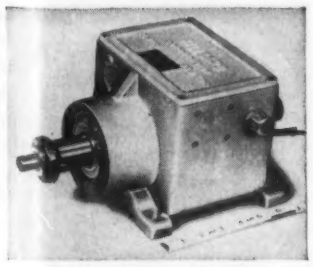
John Crane — MECHANICAL PACKINGS · SHAFT SEALS · TEFLON PRODUCTS · LAPPING MACHINES · THREAD COMPOUNDS

CRANE PACKING COMPANY

OFFICES IN ALL PRINCIPAL CITIES

▲ For more details circle **NED-94 F9** on enclosed inquiry slip ▲

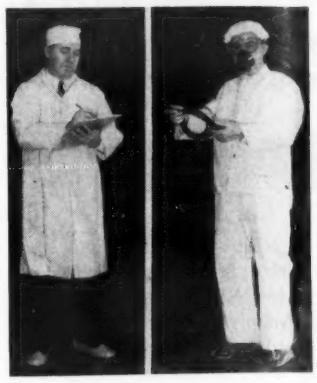
INTERMITTENT DRIVE UNIT operates from rotary power source



Precise intermittent motion from a constant source of rotary power is provided by this Intermittent Drive Unit. Motion can be applied to clip and bend, shear or slash, oscillate or repeat, raise or lower, or index and position. Operating speed is in the 40 to 400 rpm range. Rated capacity is 36 lb-ft for the 14 x 7-in. unit. It is totally enclosed in an oil bath housing and features highly flexible mechanical or electrical control. Base price is $289. Made by **Hilliard Corp.**, 102 W. Fourth St., Elmira, N. Y.

▲ For more details circle **NED-96 F9** on enclosed inquiry slip ▲

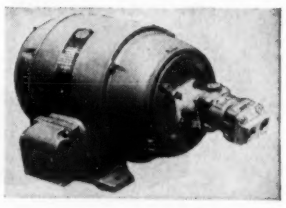
DISPOSABLE GARMENTS offer radiation protection



Medical and beret style hats, shirts, pants, lab coats, aprons, boots, plastic shoe covers, and translucent "nimble finger" Pylox gloves comprise line of disposable radiation protective clothing. Garments are made of a nonwoven fabric reinforced with a nylon thread. Surfacing is cellulose wadding, treated for fire resistance and water repellency. Also available are red and white washable duck shoe covers, dust hoods, approved respirators, and gas masks. Offered by **Industrial Products Co.**, 2807 N. Fourth St., Philadelphia 33, Pa.

▲ For more details circle **NED-97 F9** on enclosed inquiry slip ▲

HYDRAULIC PUMP-MOTOR coupled on splined shaft



Perfect alignment is automatically attained on this hydraulic pump - motor with splined shafts on pump and motor. Mounting area is thus minimized. Motor is designed to couple to various types of aircraft hydraulic pumps, or it can be supplied with a bell housing for coupling to flange mounted pumps with keyway shaft. It can also be supplied for double-end mounting to drive two pumps. Continuous duty, dripproof, high starting torque motors are available in ¾ to 25 hp. Made by **Palley's**, Dept. MP, 2263 E. Vernon Ave., Los Angeles 58, Calif.

▲ For more details circle **NED-98 F9** on enclosed inquiry slip ▲

AURAND

CLEANING TOOLS
ELECTRIC OR PNEUMATIC

Zip away **SCALE RUST PAINT**

Powerful rotary chipping action completely removes stubborn accumulations from iron, steel, brick, concrete, etc. with less effort. Adjustable depth shoe for controlling depth of cut. Renewable cutter heads. Two sizes in both electric and pneumatic models. Lightweight.

Write for the money-saving facts.
AURAND MFG. & EQUIP. CO.
1322 Ellis St. • Cincinnati 23, Ohio

▲ For more details circle **NED-99 F9** on enclosed inquiry slip ▲

NEW GAGES NEW IDEAS

IN THE 1959

Dwyer

INSTRUMENT MANUAL

Need a meter for *direct* reading of both air velocity and static pressure? An inexpensive gage that tells homeowners when to change air filters? A complete, accurate combustion test kit, or a manometer that *rolls* up to fit compactly in your tool box? You'll find these and many more money-saving ideas described in this free Dwyer manual. It's packed full of valuable information about Dwyer's complete line of instruments.

- **Magnehelic Gages . . . velocity, resistance, draft, static and gas pressure.**
- **Inclined Tube Gages . . . draft, velocity, slight pressure variations.**
- **Air Filter Gages . . . models for every installation.**
- **Hook Gages . . . a true low pressure calibration standard.**
- **Air Velocity Meters . . . direct reading of air velocity and static pressure.**
- **Flowmeters . . flow measurement of gas**
- **Wind Speed Indicators**
- **Slack-Tube Manometers . . . roll-up types.**
- **Flex-Tube Manometers . . . U-tube, well types.**
- **Inclined-Vertical Manometers**
- **Combustion Test Kit . . . for CO_2 content, draft, temperature, smoke.**
- **Pitot Tubes . . . inch-graduated, stainless steel.**
- **Pressure-Actuated Switches**
- **Special Instruments, Designs**

Send for your free copy today

F. W. DWYER MFG. CO.

P. O. BOX 373Q • MICHIGAN CITY, INDIANA

▲ For more details circle **NED-100 F9** on enclosed inquiry slip ▲

"TWO ANSWERS" TO BETTER HAND PROTECTION

CHARCO "NEO-SOL" ***ALL-NEOPRENE RUBBER***

CHARCO "*HY-SOL*" ***BUNA N SYNTHETIC RUBBER***

"NEO-SOL" All-Neoprene industrial protective gloves offer dependable protection from most industrial chemicals and solvents, and have excellent snag resistant qualities.

"HY-SOL" Buna N Synthetic Rubber gloves offer premium protection against, and outstanding resistance to, organic solvents and industrial chemicals.

CHARCO'S PROTECTIVE GLOVES FOR INDUSTRIAL USE ARE NOT LATEX-TYPE GLOVES, THEY ARE MILLED MULTIPLE-DIP CEMENT-TYPE GLOVES WHICH OFFER LONGER, SAFER SERVICE.

Write for
INDUSTRIAL GLOVE CATALOG

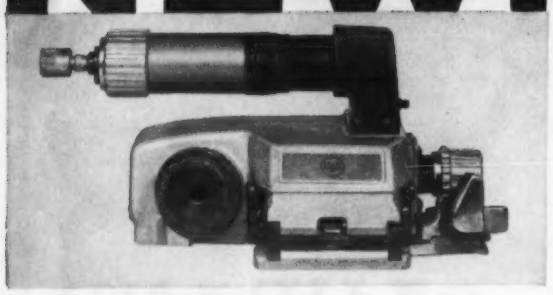
Available in a complete range of sizes, lengths, and thicknesses, with "Grip-Saf" Hand or Smooth Finish.

CHARLESTON RUBBER COMPANY

18 STARK INDUSTRIAL PARK CHARLESTON, SOUTH CAROLINA

▲ For more details circle **NED-95 F9** on enclosed inquiry slip ▲

NEW!



Hand-Portable, pneumatic-powered

USS Round Steel Strapping Machine

MODEL 13 ties boxes, cartons, pallets, etc., with 12- to 15-gauge USS Round Steel Strapping quickly and easily—up to 10 ties per minute. The Model 13 is pneumatic powered and has adjustable tensioning. Weighs only 20 lbs., and can be readily carried to where the work is heaviest. Cuts cost, too! WRITE for descriptive literature.

USS is a registered trademark

Complete Strapping Service
Strapping • Tools • Technical Assistance

U. S. Steel Supply Division of USS United States Steel

Steel Service Centers and Complete Strapping Service, Coast to Coast
USS Steel Strapping Formerly Gerrard Steel Strapping

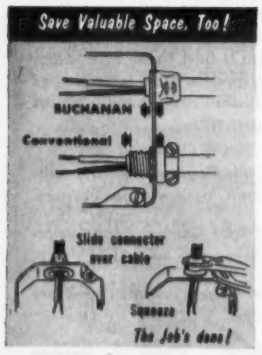
▲ For more details circle **NED-101 F9** on enclosed inquiry slip ▲

SAVE

up to 15c every time you install a BUCHANAN pres-SURE Romex Connector*

No other Romex Connector gives you all these important advantages . . .

LOWER INSTALLED COST — Save up to 2-minutes installation time per connector. On-the-job experience has shown that installed costs are lower than conventional connectors, — regardless of connector cost.



MORE WIRING ROOM — Connector extends less than 3/64" into box.

EASIER TO INSTALL — One quick simple squeeze with channel-lock or electrician's pliers simultaneously locks connector to cable and box. To install, merely insert cable in box knockout and slide connector over cable. No clamps, screws or lock nuts.

QUICKER TO REMOVE — An equally quick and simple squeeze at 90-degrees to installation "crimp" simultaneously unlocks connector from cable and box.

BETTER CABLE PROTECTION — Extra large bearing surfaces distribute pressure on cable to minimize insulation abrasion.

BETTER OVERALL PERFORMANCE — Exclusive "crimp-type" installation insures permanently-tight vibration-proof connections of high tensile strength. No screws or nuts to work loose. Special high grade aluminum alloy can't rust.

3/4" trade size—fits standard 1/2" knockout.

Approved for 14/2, 14/3, 12/2, 12/3 and 10/2 non-metallic sheathed cable.
Also adaptable for use on:
- Portable cords or 10/3 Romex (1/2" or smaller diameter).
- (2) 12/2 or smaller Romex.
- 12/2 or smaller UF.
- 12/3 UF (by slightly pre-flattening connector).

***Catalog No. 1030—An *exclusive* Buchanan development (Patent 2527227).**

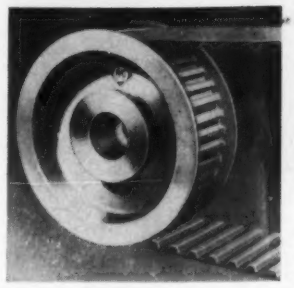
Ask your distributor, or write for samples and Bulletin J-6

BUCHANAN
ELECTRICAL PRODUCTS CORPORATION
HILLSIDE NEW JERSEY

In Canada
GASACCUMULATOR COMPANY (CANADA) LTD.
12 GOWER ST., TORONTO 16, ONT.
Export
PHILIPS EXPORT CO.
100 E. 42nd ST., NEW YORK, N. Y.

▲ For more details circle **NED-102 F9** on enclosed inquiry slip ▲

TIMING BELT DRIVE
steel cords are imbedded in neoprene



Load applications from subfractional to 600 hp and torque load range from thousands of pounds-foot down to light loads in ounce-inches can be accommodated by the Time-Tex timing belt drive. Speed range is 0 to over 16,000 fpm. Steel cords are imbedded in neoprene and molded with a nylon base fabric. With no dependence upon friction, there is no need for high initial tensions. Small pulleys, short centers, narrow belts, and high capacities are features. Speed is transmitted uniformly without chatter or vibration. Timing belt drives are available in 1/5, 3/8, 1/2, 7/8, and 1 1/4-in. pitches. Made by **Allis-Chalmers Mfg. Co.**, 918 S. 70th St., Milwaukee 1, Wis.

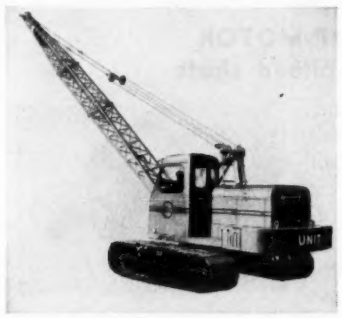
▲ For more details circle **NED-103 F9** on enclosed inquiry slip ▲

FASTENER DRIVE TOOL
employs power assisted drive piston

Wide assortment of fasteners in lengths up to 4 in. can be driven into concrete, masonry, and steel with the Model DX-100 power-assisted drive tool. Made of fine tool steel, drive tool is merely struck with hammer. Maximum force is transmitted where it is needed. Danger of free-flying fasteners is prevented. Made by **Hilti Rapid Fastening Systems, Inc.**, Dept. A121, 73 Southfield Ave., Stamford, Conn.

▲ For more details circle **NED-104 F9** on enclosed inquiry slip ▲

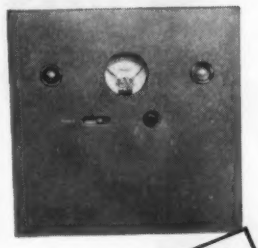
CRANE & EXCAVATOR
designed for heavy duty uses



Convertible with various attachments, the heavy duty Model 1220 3/4-cu yd excavator has a capacity of 16 tons when equipped for crane operation. Turntable withstands stresses and strains in heavy duty use. Features include one-piece cast gear case, involute splined shafts, automatic traction brakes, and twin hook rollers. Power plant is a General Motors diesel engine with or without torque converter or a Chrysler eight-cylinder gasoline engine with torque converter. Made by **Unit Crane & Shovel Corp.**, 6411 W. Burnham St., Milwaukee 19, Wis.

▲ For more details circle **NED-105 F9** on enclosed inquiry slip ▲

OVERLOAD MONITOR
CUTS DOWNTIME... INCREASES PRODUCTION!



The Sperry MONITRON gives complete overload-underload protection to electrically driven machinery . . . MONITRON instantly initiates desired control action when load varies beyond preset limits, such as releasing clutch, applying brake, signaling warning, etc.

$271

30 DAY FREE TRIAL! Install a MONITRON on your machine . . . prove to yourself that it does everything we claim!

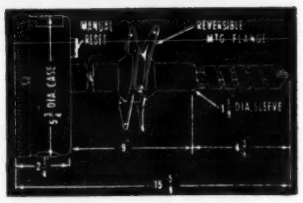
Sperry MONITRON
MACHINE-LOAD MONITOR
Representatives in Principal Cities

SPERRY PRODUCTS, INC. • 1706 SHELTER ROCK RD. • DANBURY, CONN.

▲ For more details circle **NED-107 F9** on enclosed inquiry slip ▲

MERCOID
HIGH TEMPERATURE LIMIT CONTROL

FM APPROVED



Mercoid Type MX-51R is an adjustable indicating type high temperature limit control actuated by a coiled bimetal element to result in a normally closed mercury (tube type) switch opening in event the supervised temperature reaches the preset limit point. An externally operated manual reset knob is arranged to reset the mercury switch after high temperature operation and normal temperature restoration.

Type MX-51R: SP-ST circuit opens automatically at the preset control setting on temperature rise. Manual reset provided to restore switch to closed position after temperature falls.

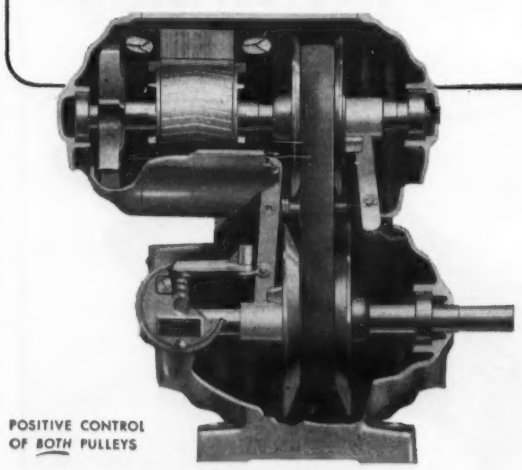
OPERATING RANGE
Adjustable: 50 to 650°F.
Minimum Differential: 20°F.

WRITE FOR BULLETIN SEB-51

THE MERCOID CORPORATION
4211 Belmont Ave., Chicago 41, Ill.

▲ For more details circle **NED-108 F9** on enclosed inquiry slip ▲

ONLY STERLING SPEED-TROL FEATURES POSITIVE CONTROL *OF BOTH PULLEYS*



POSITIVE CONTROL OF BOTH PULLEYS

For these advantages:

- ★ Positively linked pulleys assure constant speed, unaffected by variations in load.
- ★ Longer belt life — no additional load from spring.
- ★ Greater safety — No injuries from springs flying loose during maintenance.
- ★ Large grease reservoirs at load bearing surfaces keep movable pulleys on a film of grease at all times.
- ★ Variable pulleys ride on precision ground, hard chrome-plated shafts.
- ★ No springs to magnify load vibration.

For additional information about the unique advantages of Sterling Speed-Trol Drives, ask for your free copy of Bulletin 195. Write to:

Offices and stocks in all principal cities. Over 400 distributors throughout the country to serve you.

STERLING ELECTRIC MOTORS, Inc.

5401 TELEGRAPH ROAD • LOS ANGELES 22, CALIFORNIA

▲ For more details circle **NED-106 F9** on enclosed inquiry slip ▲

HYDRAULIC

REMOTE CONTROL

SYSTEMS

Completely self-contained . . . single tube . . . remote control eliminates use of compensators. Rugged and reliable . . . used in engine, machine tool and many other factory applications . . . wherever positive, accurate, instant duplication of movement is needed . . . no "sponginess."

EASILY INSTALLED

Sperry CONTROLS

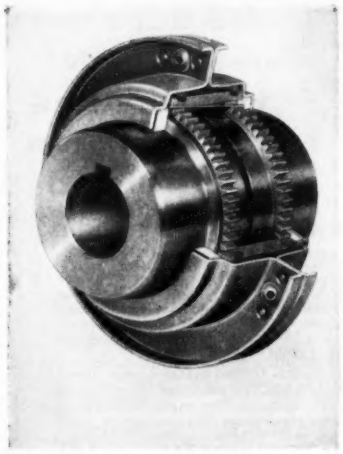
HYDRAULIC REMOTE CONTROLS

Representatives in Principal Cities

SPERRY PRODUCTS, INC. • 1706 SHELTER ROCK RD. • DANBURY, CONN.

▲ For more details circle NED-109 F9 on enclosed inquiry slip ▲

LOW PRICED . . . among high-quality flexible couplings



LINK-BELT MOTOR COUPLINGS

You're further ahead in every way with Link-Belt Motor Couplings.

Besides low initial cost, they provide savings in assembly and servicing. Allen head, spiral cam fasteners open and close with only a quarter turn.

All-metal design assures high capacity and durability. Also important, Link-Belt Motor Couplings are available off-the-shelf for shafts up to 1⅞".

FOLDER 2875 contains complete details. Send for your copy today.

LINK-BELT

GEARED FLEXIBLE COUPLINGS

LINK-BELT COMPANY: Dept. NED, Prudential Plaza, Chicago 1, Ill. 15,155

▲ For more details circle NED-110 F9 on enclosed inquiry slip ▲

Republic STEEL LOCKERS

. . . mark of a good place to work

It is easy to improve employee relations with clean, attractive dress-wash-and-change facilities planned around Republic Steel Lockers. Big, roomy interiors, well planned for convenience and good ventilation. Strong and sturdy—made of steel. Complete protection. Bonderized for long service life. Republic's Berger Division will help you with locker planning. Call your Republic representative today, or write direct.

REPUBLIC STEEL
BERGER DIVISION
1034 Belden Ave. • Canton 5, Ohio

▲ For more details circle NED-111 F9 on enclosed inquiry slip ▲

HYDRAULIC PUMP powers tools, jacks, and cylinders

Two-speed portable Model P-550 hydraulic pump is designed for operation of hydraulic bus bar benders, conduit benders, knockout punches, bench presses, hydraulic cylinders, and jacks. The rapid-approach pump can be started under full load. Oil delivery is 115 cu in. per minute up to 150 psi during cylinder plunger approach and, under load, automatically switches to 57 cu in. per minute oil delivery at 10,000 psi. Power for the axial piston pump is supplied by a 1-hp, standard voltage, repulsion motor. Price is $370. Made by **Blackhawk Mfg. Co.**, Dept. MP, 5325 W. Rogers St., Milwaukee 46, Wis.

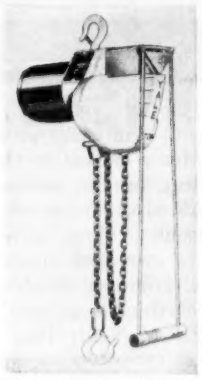
▲ For more details circle NED-112 F9 on enclosed inquiry slip ▲

ABRASIVE WHEEL both grinds and finishes

This raised-hub, two-layer disc-wheel for portable grinders is usable for grinding and finishing without changing wheels. Holding wheel at a 30-45-degree angle to work surface exposes coarse-grained layer for fast stock removal from weld beads. At a 10-20-degree angle, wheel's second layer is brought to bear and produces a fine finish. Finishing layer is available in five different grits. Made by **Bay State Abrasive Products Co.**, 21 Union St., Westboro, Mass.

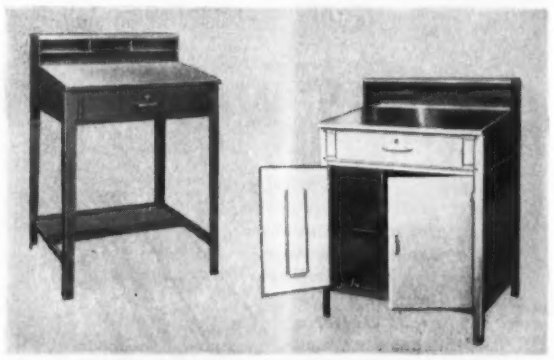
▲ For more details circle NED-113 F9 on enclosed inquiry slip ▲

LINK CHAIN HOISTS in capacities up to 2 tons



Link chain model of the Midget King electric hoist is offered, along with roller chain models, in ⅛, ¼, ½, 1, and 2-ton capacities. The alloy type link chain flexes in any plane to allow picking up material not directly under the hoist itself. Units have hardened alloy steel gears running in oil baths. Hook and trolley types are offered. Made by **Yale & Towne Mfg. Co.**, Yale Materials Handling Div., 11000 Roosevelt Blvd., Philadelphia 15, Pa.

▲ For more details circle NED-114 F9 on enclosed inquiry slip ▲



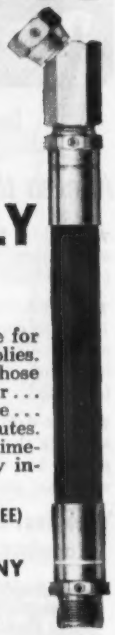
Republic SHOP DESKS

. . . strong, sturdy, convenient

Republic Shop Desks offer sit-down conveniences with stand-up comfort. Plenty of drawer and cabinet storage space with flat key type locks. Large desk top work area. Built-to-take it—made of steel. Republic's Berger Division is *the* leading manufacturer of work benches, tool racks, shelving, and other speciality shop equipment. Talk over your shop furniture problems with your Republic-Berger representative.

REPUBLIC STEEL
BERGER DIVISION
1034 Belden Ave. • Canton 5, Ohio

▲ For more details circle NED-115 F9 on enclosed inquiry slip ▲



Your Reliable Source

FOR

WEATHERHEAD "RIGHT-NOW"

HOSE ASSEMBLY SERVICE

It's a fact. We are your leading source for permanently attached hose assemblies. Right in our own service shop, swaged hose assemblies can be made to your order . . . any size . . . any type . . . any pressure . . . any length . . . any quantity in minutes. You can't afford to overlook this time-saving service. Up to 2" hose—for any industrial application.

YOUR HOSE ASSEMBLIES MADE IN 3 (THREE) MINUTES RIGHT IN OUR OWN SHOP!

THE WEATHERHEAD COMPANY
FORT WAYNE DIVISION
Dept. NED-6, 128 W. Washington Blvd.
Fort Wayne, Indiana

▲ For more details circle NED-116 F9 on enclosed inquiry slip ▲

WEATHERHEAD answers every TUBE FITTING need

complete range — flared, flareless, or pipe fittings. Valves and drain cocks.

brass
stainless steel
carbon steel

pressures up to 10,000 p.s.i.

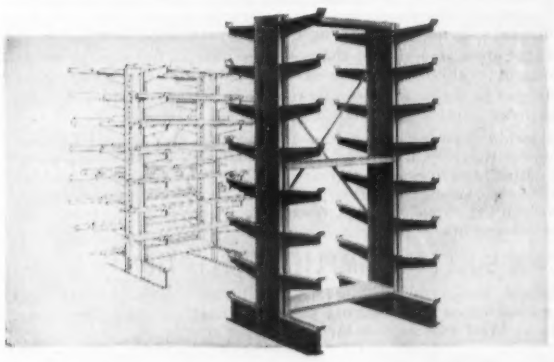
sizes for ⅛" to 2" O.D. tubing ⅛" to 2" pipe

quantities for large production for small maintenance needs

YOUR COMPLETE SINGLE-SOURCE FOR ALL YOUR HOSE & FITTINGS NEEDS

THE WEATHERHEAD COMPANY
FORT WAYNE DIVISION
Dept. NED-6, 128 W. Washington Blvd., Fort Wayne, Indiana

▲ For more details circle NED-117 F9 on enclosed inquiry slip ▲



Republic BAR RACK

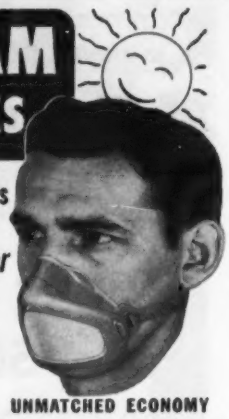
stacks . . . stores 14 tons in 36" space

The all new Republic Steel Bar Rack is the ideal solution to a practical, economical way to store bars, pipes, rods, any elongated stock. Arm arrangement permits easy access and stock segregation. Each arm supports 2,000 pounds. Arms are adjustable on 2" centers. Bonderized. Available in either Olive Green or Gray. Size: 78" high, 36" wide, 33" deep at the base. Call your Republic-Berger Representative. Or, write direct.

REPUBLIC STEEL
BERGER DIVISION
1034 Belden Ave. • Canton 5, Ohio

▲ For more details circle NED-118 F9 on enclosed inquiry slip ▲

FLEX-A-FOAM DUST MASKS



Dust protection your workers will welcome and wear *in even the HOTTEST weather*

★ **Ideal for Hot Weather** Filter's porous action absorbs and actually exhales body heat.

★ Flex-A-Foam's lightweight (only 1 ounce complete) makes it cool and comfortable to wear — not hot and cumbersome like old-fashioned respirators.

★ Flex-A-Foam is easier to breathe and talk through than an ordinary pocket handkerchief — does away with that stuffy, smothered feeling.

Your best *Ounce of Protection* against Irritating Dust

UNMATCHED ECONOMY

Flex-A-Foam is the lowest priced *quality* respirator on the market today.

Flex-A-Foam's washable filter outlasts throw-away type by more than 100 to 1.

Fewer filter replacements with Flex-A-Foam Dust Masks mean fewer lost production hours.

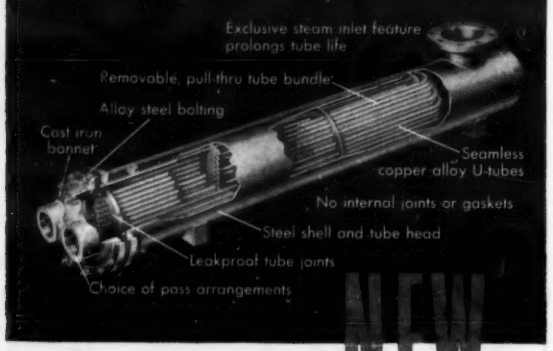
Sample only $1.45 postpaid (Industrial price only)

FLEX-A-FOAM® DUST MASK

FLEXO PRODUCTS, INC. • Westlake, Ohio

▲ For more details circle **NED-120 F9** on enclosed inquiry slip ▲

for sheer ruggedness, downright economy, top-notch performance and widespread choice



there's just no equal to NEW

ROSS INSTANTANEOUS HEATERS

It's a fact: The new line of Ross Instantaneous Heaters packs more benefits than any equipment of its type ever built!

Unsurpassed in efficiency, it is the product of the best heat exchanger engineering brains in the business. For over 40 years, Ross Heat Exchanger (now part of American-Standard* Industrial Division) has been completely dedicated to the design and manufacture of heat transfer equipment.

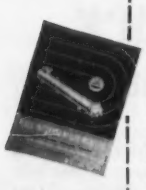
Rock-bottom in economy, the new line reflects the newest thinking in cost-cutting, time-saving standardization techniques.

Rugged to the core, it is built to ASME Code requirements and utilizes durable materials throughout.

Broad in its range, it provides 128 sizes (2 and 4 pass) to meet virtually every industrial, commercial and institutional water heating requirement: service water, booster, space heating convertor, radiant heating panels and snow melting equipment, swimming pools, storage towers . . . yes, even process work involving other fluids.

NEW BULLETIN SIMPLIFIES SELECTION

Brand new, Bulletin 304.4K1 contains complete data and specifications for selecting your own unit . . . and shows you how. Mail the coupon for your copy.



To: American-Standard Industrial Division
Detroit 32, Mich.

Send your new Bulletin 304.4K1 describing Ross Type W-100 Instantaneous Heaters.

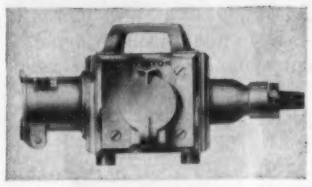
NAME
TITLE
COMPANY
ADDRESS
CITY ZONE STATE

* AMERICAN-Standard and Standard ® are trademarks of American Radiator & Standard Sanitary Corporation.

AMERICAN-Standard
INDUSTRIAL DIVISION
AMERICAN BLOWER PRODUCTS • KEWANEE PRODUCTS • ROSS PRODUCTS

▲ For more details circle **NED-121 F9** on enclosed inquiry slip ▲

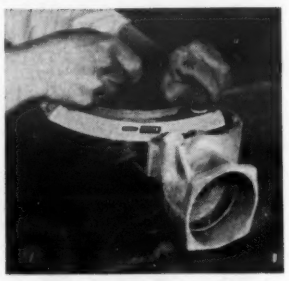
CURRENT TAP
is explosionproof three-branch unit



Three separate sets of electrical apparatus can be operated at the same time from this explosionproof Type CPSCT current tap which has three 3-pole branch receptacles. Intended for use in Class I, Groups C and D hazardous areas, tap has nonsparking housing and covers, plus carrying handle. Each branch receptacle employs the dead-end principle to isolate exposed contacts from live inner contacts. Made by **Appleton Electric Co.**, 1701 Wellington Ave., Chicago 13, Ill.

▲ For more details circle **NED-122 F9** on enclosed inquiry slip ▲

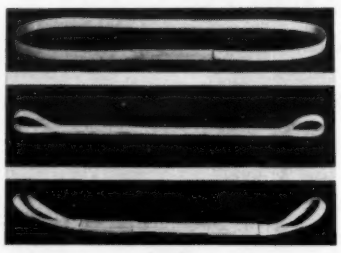
CONVEX FORMING TOOL
shaves and smooths curved surfaces



Latest addition to Surform line of speed forming tools is this convex plane-type Model 397 designed to shape, shave, and smooth curved surfaces and to file and form recessed areas. The two-knob tool can be used to draw or push-cut wood, aluminum and copper, plastics, asphalt tile, and even mild steel. Chips pass through the blade to prevent clogging. Fine-cut blade is interchangeable with Surform plane and file type models. Made by **Stanley Works**, Stanley Tools Div., 111 Elm St., New Britain, Conn.

▲ For more details circle **NED-123 F9** on enclosed inquiry slip ▲

NYLON WEB SLINGS
1000 to 13,000-lb capacities



Scratching, marring, and denting of finished products, regardless of how polished, fragile, or delicate they are, are prevented when they are handled with Saf-t-grip slings of nylon webbing. The soft yellow nylon will not kink or tangle, and will form easily around small radius parts or materials with a basket or choker hitch. Slings resist abrasion, heat, fungus, moisture absorption, and mild chemicals. All sizes are marked with length and safe working loads. Three styles in 1000 to 13,000-lb capacities are produced in varying length and widths: Endless or grommet, double eye, and reverse eye. Neoprene covering is optional. Made by **Pennsylvania Sling Co.**, 501 McNeilly Rd., Pittsburgh 26, Pa.

▲ For more details circle **NED-124 F9** on enclosed inquiry slip ▲

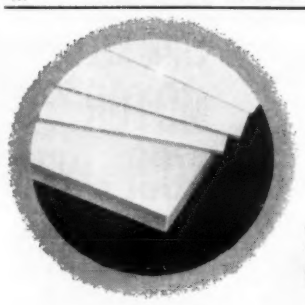
Schrader® AIR-HYDRAULIC ROTATING PRESSURE JOINTS

for high-speed rotation, high pressure

Now you can be sure of dependable compressed air or hydraulic installations through high-speed shafts and axles. Just specify Schrader's new Rotating Pressure Joints. Connecting a rotating member and a fixed unit, these compact, ball-bearing mounted joints assure a minimum of friction and long life. They are designed for pressures up to 400 psi and speeds up to 5000 rpm. Available with rugged steel mounting flanges to minimize vibrations encountered in high-speed operations of 2000 rpm or higher. Write for free Schrader catalog.

A. SCHRADER'S SON
Division of SCOVILL
459 Vanderbilt Avenue, Brooklyn 38, N. Y.

▲ For more details circle **NED-126 F9** on enclosed inquiry slip ▲



Be sure the TEFLON* you buy has the Qualities You Need

Processing can radically change Teflon properties

Take flex life as an example. The Teflon sheet illustrated was quenched to 50% crystallinity, resulting in an excellent flex life of 60,000 cycles. However, through lack of process control, it might have been cooled more slowly, giving a 56% crystallinity and a flex life of 40,000 cycles . . . A LOSS OF 20,000 CYCLES OF FLEX LIFE!

Garlock's Plastics Division, the United States Gasket Company, has years of experience with fluorocarbon resins which guarantee you the right Teflon properties every time. This, plus assurance of fast delivery anywhere, makes Garlock your prime source of Teflon sheet, rod, tape, tubing, bars, cylinders. Call one of Garlock Packing Company's 26 sales offices and warehouses throughout the U.S. and Canada.

THE GARLOCK PACKING COMPANY, Palmyra, N.Y.

*DuPont Trademark for TFE Fluorocarbon Resin

United States Gasket — Plastics Division of GARLOCK

▲ For more details circle **NED-127 F9** on enclosed inquiry slip ▲

RESIWELD—New One Part Structural Adhesive

BONDS WITH 10 TON STRENGTH

Test kit includes 1 lb. Resiweld #105, plastic squeeze applicators, plus instructions. Send $5.00 cash, check or money order and the kit will be sent post paid. Or, free Technical Bulletin RTB-18A sent on request.

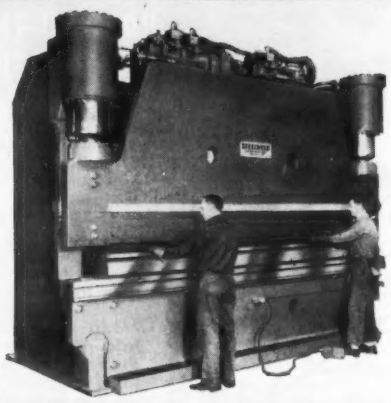
Resiweld #105—an improved epoxy formulation requires no mixing, no preparation.

- Virtually welds metals together—steel, brass, aluminum, stainless steel, nickle.
- Aluminum Color
- Fast Curing: 20 to 30 minutes at 350° F.; 60 to 90 minutes at 300° F.; 10 to 15 minutes at 400° F.
- Permanently resistant to water, salt spray, chemicals and solvents.
- Does not shrink during cure—requires only contact pressure.
- Applied by knife, trowel, roll coating, caulking gun or pressure feed system.

H. B. Fuller Co.
255 Eagle Street • St. Paul 2, Minn.
ADHESIVE MANUFACTURERS FOR MORE THAN 70 YEARS
PLANTS IN 13 MAJOR CITIES

▲ For more details circle **NED-125 F9** on enclosed inquiry slip ▲

STEELWELD
HYDRAULIC PRESS BRAKES



HYDRAULIC BRAKE RAM REVERSES AT ANY POINT

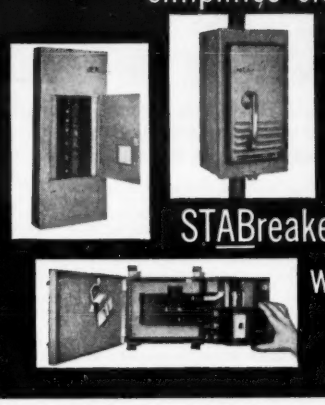
One of the many outstanding features of Steelweld Hydraulic Press Brakes is the reversing ram. The ram may be started, stopped and reversed at any point in the stroke. It need not continue through a complete cycle. You will find this a big time saver when setting up dies.

Send for Catalog No. 2024
See the many profit-aiding features of Steelweld Hydraulic Press Brakes. (Available all capacities to 2000 tons).

THE CLEVELAND CRANE & ENGINEERING CO.
6674 East 281st Street • Wickliffe, Ohio

For more details circle NED-128 F9 on enclosed inquiry slip

STABreaker flexibility simplifies electrical maintenance



one STABreaker inventory works 3 ways

Maintenance is simplified by stabs on AB breakers. Stabs permit quick removal without wiring changes and provide a visible disconnect. **LESS INVENTORY**—one breaker can be used three ways: (1) **In AB-I's**—from 15 through 400 amps in only 2 standard enclosures. (2) **In lighting and power panelboards**—through 600 amp mains, 400 amp branches in only 4 standard enclosures. (3) **In bus duct plug-ins**—with all of the "plug-in" advantages inherent in STABreaker AB-I's. **IMMEDIATE AVAILABILITY**—"over-the-counter" service from your local distributor. Write for Bulletins 1-155 and 1-160, Federal Pacific Electric Company, General Offices: Dept. 288, Newark 1, New Jersey.

FPE **FEDERAL PACIFIC ELECTRIC COMPANY**
The Best in Electrical Distribution and Control Equipment

For more details circle NED-129 F9 on enclosed inquiry slip

pressure-sensing conveyor

Operates on fraction of usual power needs

Rapistan's new APC (Adjustable Pressure) Conveyor operates on less horsepower than any other form of power belt conveyor. Up to 200 ft. of conveyor powered by 1/3, 1/2 or 3/4 hp drives. Because power requirements are so exceptionally low, drive units are less costly, and belt tension (therefore belt stretch) is kept at absolute minimum. This means less maintenance for further savings.

Write for new Bulletin 1200 illustrating APC Conveyor.

Rapistan® new ideas in materials handling

The RAPIDS-STANDARD CO., Inc., 606 Rapistan Bldg., Grand Rapids 2, Mich.

For more details circle NED-130 F9 on enclosed inquiry slip

FAULT LOCATOR
quickly locates accidental grounds

Foam rubber covered earphones offered as standard equipment on the redesigned Brunt Faultfinder assure a loud, clear signal, as well as comfort in use. The combination ground detector and fault locator quickly locates accidental ground on alternating or direct current power systems up to 600 v while the system is energized. It imposes only 2 amp on the circuit to prevent damage to equipment on the line. It weighs only 18 lb and can be used by one man. Made by **Parr Mfg. Corp.**, 44 Austin St., Newark, N. J.

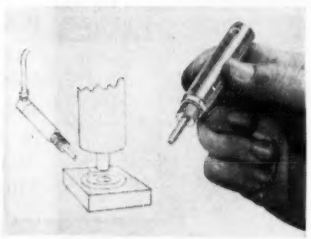
For more details circle NED-131 F9 on enclosed inquiry slip

HIGH VOLTAGE TESTER
checks insulating oil breakdown

On-the-spot tests of the breakdown of insulating oils used in transformers, high voltage capacitors, or bushings can be made with the 42-lb Model 4505-A Hypot high voltage tester. Lighter than its predecessor by 33 lb, tester measures only 8½ x 16 x 8 in. Test voltage is continuously adjustable from 0 to 35 kv ac at a 2-kva rating. Set operates from 110-120 v ac. Units with built-in, motor-driven, automatic rate-of-rise control to increase test voltage at 3 kv per second are also available. Price is $725. Made by **Associated Research Inc.**, 3777 W. Belmont Ave., Chicago 18, Ill.

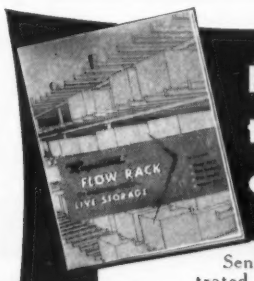
For more details circle NED-132 F9 on enclosed inquiry slip

MINIATURE AIR CYLINDER
is hollow shaft, spring return type



Bore sizes of ⅜ and 9/16 in. and numerous stroke lengths are offered in this Minimatic hollow shaft, spring return air cylinder for use in many automated and semiautomatic work operations. In punch press operation shown, cylinder extends shaft into bottom die on press up stroke, blasting stream of air and mist of lubricant through its hollow shaft. This kicks out chips and workpiece and lubricates for next punch. Cylinders are supplied with stud mountings only, but may be easily clamp-block mounted. Made by **Clippard Instrument Laboratory, Inc.**, 7390-R Colerain Rd., Cincinnati 39, Ohio.

For more details circle NED-133 F9 on enclosed inquiry slip



New Way to store more on less floor

Send for this new illustrated brochure today. It's full of practical ideas on more efficient storage, work positioning, parts selection, inventory control. Ask for "Flow Rack Brochure".

LET Rapistan® FLOW RACK™ do this for you

- ★ Make full use of cube space available over given floor space.
- ★ Keep storage "alive" — moving to point of selection and use.
- ★ Provide a place for every item, save "hunting" time.
- ★ Speed order selection by shortening distances walked.
- ★ Give you first-in-first-out inventory movement control.

Rapistan® new ideas in materials handling

The RAPIDS-STANDARD CO., Inc.
607 Rapistan Bldg.
Grand Rapids 2, Michigan

For more details circle NED-134 F9 on enclosed inquiry slip

2749

MOSTLY— THEY TALK ABOUT OUR NEW
PORTELVATOR®
THE HANDY HAMILTON PORTABLE ELEVATING TABLE

It LIFTS LOWERS POSITIONS TRANSPORTS all compact, heavy loads!

FOUR POINT SUPPORT

Top plate locks by gravity at any attained height when hand-crank pressure is released.

EASE OF MOVEMENT SAFETY INHERENT IN DESIGN

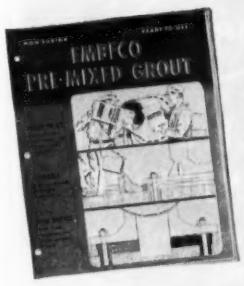
FIVE STANDARD MODELS (capacities to 3,000 pounds)

Write for FREE LITERATURE BATCH No. P-800

THE HAMILTON TOOL COMPANY
901 HANOVER STREET · HAMILTON · OHIO

For more details circle NED-135 F9 on enclosed inquiry slip

BEFORE YOU GROUT ANOTHER PIECE OF HEAVY EQUIPMENT



FREE 8-PAGE BOOKLET... with full details of applications, advantages and specifications for non-shrink EMBECO Pre-Mixed Grout. Write for your free copy.

. . . get all the facts now on EMBECO Pre-Mixed Grout . . . ready-to-use, flowable, **non-shrink grout.** Using the right grout now can save you important hours and dollars in re-grouting . . . repairs and production downtime.

The Master Builders Co., Cleveland 3, Ohio
Division of American-Marietta Co.

MASTER BUILDERS® EMBECO*

*EMBECO is the registered trademark of The Master Builders Co. for its specially prepared, flowable non-shrink grout.

For more details circle NED-136 F9 on enclosed inquiry slip

R-K's NEW 2" pitch overhead conveyor trolleys are really RUGGED

Greater capacity, too — (135 lbs.) with our NEW No. 3 trolley. The trolley wheel is a screw machine product designed for easy rolling, trouble-free operation. Available with neoprene or felt seals. Trolley brackets, center link and "H" attachment are rugged steel forgings.

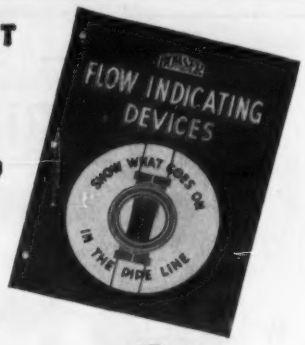
Write for this new bulletin illustrating cost-cutting applications for Rapistan-Keystone overhead conveyor.

R-K No. 3 trolley features fully-machined wheels, hardened raceways, twelve 5/16" ball bearings, replaceable grease fitting with ball check device for positive lubrication.

Rapistan®-KEYSTONE, INC.
21752 West Eight Mile Road, Detroit 41, Michigan

For more details circle NED-137 F9 on enclosed inquiry slip

THIS BOOKLET "FLOW INDICATING DEVICES" IS YOURS



... CONTAINS DATA ON WIDE SELECTION OF FLOW DEVICES SUCH AS:

Fig. 54A Flow Sight — Fig. 816 Teleflo Indicator — Fig. 811 Flow Indicator

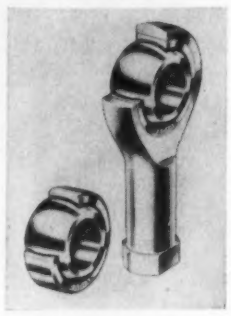
Plant and product engineers have relied on Bowser, liquid handling specialists since 1885, for prompt service. For sight glasses in single or double-window types, gravity or pressure models; or for electric or mechanical indicators . . . there is a Bowser man nearby ready to help you . . . quick!

PRODUCT OF BOWSER RESEARCH — WRITE FOR FLOW DEVICES BOOKLET — Contains Complete Specifications

BOWSER, INC., 1381 E. CREIGHTON, FT. WAYNE, IND.

For more details circle NED-138 F9 on enclosed inquiry slip

TEFLON BEARINGS & BUSHINGS in spherical and rod-end styles



Operating without lubrication, series of spherical bearings, rod-end bearings, and bushings afford the low friction advantage of Du Pont Teflon. This TFE-fluorocarbon fiber material also has properties which suit it for low surface speeds, high unit loads, and high dynamic loading. Bearings are also resistant to chemicals and corrosion. Inner race does not turn on bolt. Bearings automatically compensate for misalignment, deflections, or mounting inaccuracies. Prices are slightly higher than all-metal bearings. Made by **Radial Bearing Corp.**, Taylor Street, Danbury, Conn.

For more details circle NED-140 F9 on enclosed inquiry slip

NYLON LAMINATED TIRE solid type is long wearing

Soft rubber laminated with nylon assures easy riding, even wear, and good traction with this Notat nylon premium tire. Jagged stones, brick, metal, or glass have no effect on this solid type tire. It is recommended as standard equipment on a broad range of materials handling equipment, as well as for replacement. Made by **Notat Tire Co.**, 1504 E. 34th St., Chattanooga, Tenn.

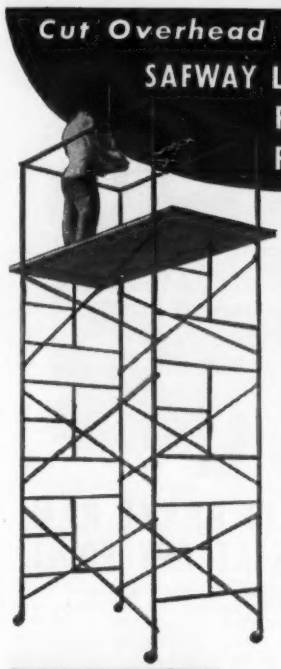
For more details circle NED-141 F9 on enclosed inquiry slip

NOISE SURVEY METER has 75 to 140-decibel range

Pointed toward the noise source, the Noise Survey Meter accurately monitors and measures noise hazards to establish noise - contour "maps" of industrial plants. The 12-oz instrument is energized by a long-life mercury battery. Sound pressure levels are read in the 75 to 140-db range. Models with frequency response characteristics based on bearing damage criteria and for noise reduction studies and acoustical engineering surveys are offered. The latter has a "flat" response. Meter can be used with the Soundscope which measures the energy distribution of sound within a narrow frequency band. Made by **Mine Safety Appliances Co.**, 220 N. Braddock Ave., Pittsburgh 8, Pa.

For more details circle NED-142 F9 on enclosed inquiry slip

Cut Overhead Working Time! SAFWAY LOW-COST TOWERS ROLL TO THE JOB, REACH HIGH WORK



MAINTENANCE MEN get around faster with a safe, handy Safway rolling scaffold tower!

Towers roll to the job on big swiveling casters and lock firmly for climbing and work completion...then unlock to follow the work or move on to another job.

Interchangeable steel scaffold parts assemble to any tower height or shape. Platform supports every 16 in. Built-in climbing ladder; 40" high guard rail.

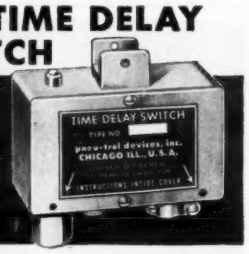
For top economy, low-cost *"packaged"* towers are available in three useful heights—8 ft., 12 ft. and 16 ft. Base area 4 x 7 ft. Tower illustrated is 12 ft. high-

SAFWAY STEEL PRODUCTS, INC. 6213 W. State St., Milwaukee 13, Wis.

Write for FREE BULLETIN 86

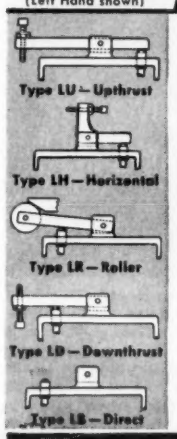
For more details circle NED-144 F9 on enclosed inquiry slip

Pneu-Trol TIME DELAY CONTROL SWITCH



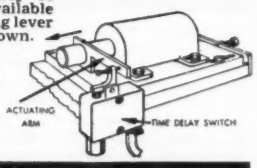
... Gives Cylinder Applications Greater Efficiency Accuracy ... Wider Use!

For any type actuation Left or Right Hand. (Left Hand shown)



- Holds Cylinder dwell accurately to fraction of second.
- Automatically re-sets.
- Simple, Compact, Rugged.

You can hold any motion or operation controlled or actuated by air or hydraulic cylinders at a positive stop on either end of the stroke for ¼ to 60 seconds in 20 to 1 ratios with Pneu-Trol Time Delay Control Switches. Simple in design with positive hydraulic timing action . . . compact and easily mounted on the machine or fixture, Pneu-Trol Switches are providing millions of trouble-free actuations in solenoid-operated cylinder applications of every type. Positive, controlled time dwell permits wider use of air or hydraulic power in automatic operations, increases accuracy of work by insuring split-second accuracy of the dwell. Available with 5 actuating lever linkages as shown.



Switch mounted to provide dwell at end of power stroke of single action, spring return cylinder.

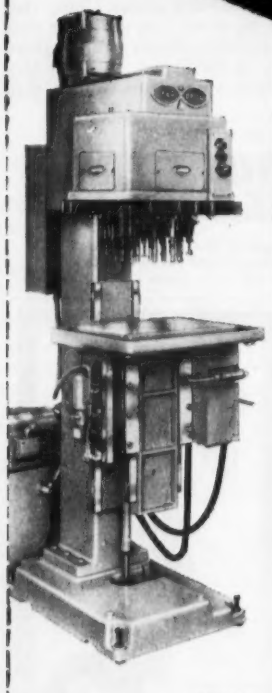
PNEU-TROL A DIVISION OF AUTO-PONENTS, INC.
2929 Grant Street • Bellwood, (Chicago Suburb) Illinois

For more details circle NED-145 F9 on enclosed inquiry slip

the NEW sensation of the machine tool industry! PRECISION'S DEKA DRILL

MULTIPLE SPINDLE DRILLING AND TAPPING MACHINE

. . . save 50% on capital outlay costs!



Top Performance

- Fully automatic drilling or tapping cycle with push button controls! Up to 14 spindles available!
- Eliminates costly set-ups — makes production runs of 250 pieces profitable!
- Drills or taps 40,000 holes per hour — floor to floor time!

Outstanding Features

RUGGED CONSTRUCTION of Deka-Drill features heavily ribbed castings — will give years of trouble-free service.

HEAVY-DUTY HYDRAULIC MECHANISM is capable of delivering over two tons pressure to the ram-type table!

HYDRAULIC LIFT — *a Deka-Drill exclusive*—easily positions the knee and table over a full 14 inches!

HYDRAULIC MODEL H712

$3545.75 with motor and controls F.O.B. Factory

DEALERS: A FEW TERRITORIES STILL OPEN. WRITE FOR DETAILS.

MANUAL MODEL M712 $1998.50 with motor and controls F.O.B. Factory

PRECISION TOOL & MFG. CO. of ILLINOIS
Dept. NED-69
1305 S. Laramie Avenue
Cicero 50, Illinois

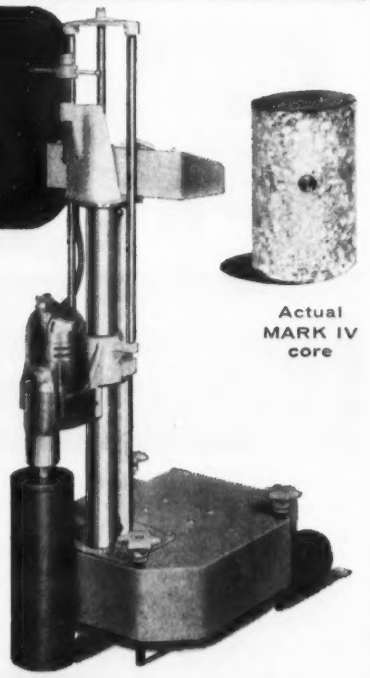
Please send me full information on Deka-Drill.

NAME _____
FIRM _____
ADDRESS _____
CITY _____ ZONE ____ STATE _____

For more details circle NED-139 F9 on enclosed inquiry slip

drill ONE INCH every 40 SECONDS in steel-reinforced concrete

with the new hydraulic MARK IV DIAMOND CORING MACHINE



Actual MARK IV core

Exclusive HYDRO-CUSHION CONTROL makes the Mobile Drill *MARK IV* the first and only masonry drilling machine on the market with *automatic hydraulic feed.*

"Cushioned" hydraulic feed *automatically* maintains the correct drilling pressure and rate of feed . . . absorbs drilling vibration to insure up to 1/3 *greater diamond bit life.*

MARK IV is designed and built to give you exceptional drilling speed, ease, economy and long, trouble-free service.

Write for complete information on the MARK IV and Mobile "Thinline" Oriented Diamond Bits.

MOBILE DRILL INDUSTRIAL DIVISION

MOBILE DRILLING, Incorporated
INDUSTRIAL DIVISION
Dept. A
960 North Pennsylvania Street • Indianapolis, Indiana

For more details circle NED-143 F9 on enclosed inquiry slip

Aget offers more! Over 38 standard Dustkop models to choose from . . . *Plus* engineering service to help you select, provide, and install the proper accessories and fittings to complete your dust collecting system. Write for illustrated folder . . . Today!

AGET MANUFACTURING COMPANY
1396 E. CHURCH STREET • ADRIAN, MICHIGAN

▲ For more details circle NED-146 F9 on enclosed inquiry slip ▲

Your parts last longer when they're

SHENANGO CENTRIFUGAL CASTINGS

Your machine parts, ferrous or non-ferrous, are subject to stress, strain and friction, day after day, year after year . . . so specify Shenango . . . and see what a difference this makes!

Shenango's centrifugal casting process insures longer life because of finer, more uniform, *pressure-dense* grain to begin with . . . free of inclusions, porosity, blowholes and other weakening defects. Then, far less machining is needed and your part is stronger . . . to last and last *and last!*

Shenango's modern and fully-equipped shops will supply you with ferrous or non-ferrous symmetrical parts in virtually any shape or size . . . rough, semi-machined or precision-finished to your most exacting specifications. For full details, write: *Centrifugally Cast Products Division*, The Shenango Furnace Company, Dover, O.

SHENANGO CENTRIFUGAL CASTINGS
COPPER, TIN, LEAD, ZINC BRONZES • ALUMINUM AND MANGANESE BRONZES
MONEL METAL • NI-RESIST • MEEHANITE METAL • ALLOY IRONS

▲ For more details circle NED-147 F9 on enclosed inquiry slip ▲

GET BULLETIN 5725

and find out about...

Yes, find out about the special design and manufacturing techniques that make an important difference...*put a plus value* in Rex Roller Chain. Learn about the rigid quality control that gives you a better chain...consistently.

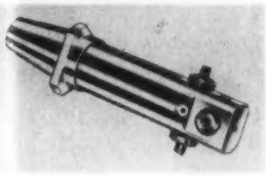
Bulletin 5725 explains why Rex Roller Chains last longer ... why Rex Roller Chains have greater resistance to fatigue and failure. Write today for your copy of Bulletin 5725, "The Plus Values in Rex Roller Chain." CHAIN Belt Company, 4686 West Greenfield Avenue, Milwaukee 1, Wisconsin.

CHAIN Belt, (Canada) Ltd., 1181 Sheppard Ave. East, Toronto, Ontario

CHAIN BELT

▲ For more details circle NED-148 F9 on enclosed inquiry slip ▲

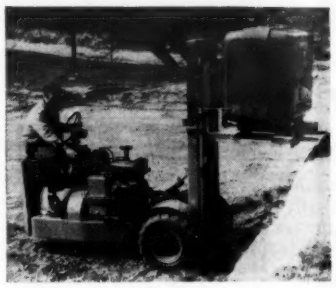
BORING BAR CARTRIDGE
features two opposed tool bits



Double-Feed boring bar cartridge has two or more diametrically opposed Sure-Bore cartridges and tool bits, each with micrometer adjustment. Counteraction of the opposed pressures minimizes "spring" in bar and insures regularity of bore size regardless of variations in stock removal. Double-Feed units can be inserted in existing boring bars, or are offered in special bars for specific uses. Cartridge is easily adapted as a floating reamer. Made by **Portage Double-Quick, Inc.**, 1043 Sweitzer Ave., Akron 11, Ohio.

▲ For more details circle NED-149 F9 on enclosed inquiry slip ▲

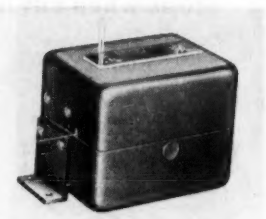
SMALL FORK LIFT TRUCK
usable indoors or outdoors



Weighing 4500 lb, this fork lift truck has a capacity of 2000 lb and lifting heights of 6 to 10 ft. Power is provided by a Wisconsin air-cooled gasoline engine or a West-German Deutz engine, both with electric starters. Truck has four forward speeds in range of 1 to 15 mph and reverse. The hydraulic hoisting mechanism is controlled from the operator's seat. Price is $3750. Made by **Getman Brothers**, South Haven, Mich.

▲ For more details circle NED-150 F9 on enclosed inquiry slip ▲

FORCE AMPLIFIER
positions controls, pens, encoders



Mechanical flow, pressure, or temperature measuring elements, or similar motion producing devices directly actuate the mechanical force amplifier. Driving power can be supplied by any external source, such as an electric motor. Input forces can be less than 0.04 oz, and output is precisely positioned with forces up to 18 oz. Linear output motion is identical with input motion within 0.001 in. Useful travel is 2 in. and full scale travel time is variable from 1 to 20 sec, depending upon driving speed. Output is used to position automatic controls, recording pens, encoders, small valves, pilots to control hydraulic servo systems, or to actuate switches. Made by **American Meter Co.**, Mechanical Components Dept., Box 309, Garland, Tex.

▲ For more details circle NED-151 F9 on enclosed inquiry slip ▲

FREE BOOK tells you how to make your drive chains last longer

Thousands of chain drive dollars have been saved—countless down-time hours have been eliminated—by following the suggestions given in the new booklet, "Care and Maintenance of Chain Drives." Send for your free copy today.

CHAIN BELT

CHAIN Belt Company
4686 W. Greenfield Ave., Milwaukee 1, Wis.
(In Canada: CHAIN Belt (Canada) Ltd.
1181 Sheppard Ave. East, Toronto)
☐ Please send new booklet, "Care and Maintenance of Chain Drives."
☐ Have a Rex Man call.
Name.....
Company.....
Address.....
City.....*Zone*.....*State*.....

▲ For more details circle NED-152 F9 on enclosed inquiry slip ▲

INDUSTRIAL INKS To Mark Anything!

Whatever the substance, Phillips has an ink to mark it permanently and legibly—or can make one. Marking experts insist on "Clear Print" Wood Block Stamp Pads and Opaque Inks. They get clear, sharp, fast-drying impressions. Also inks for brush, pen, stencil or machine application available in a variety of colors and quantity containers.

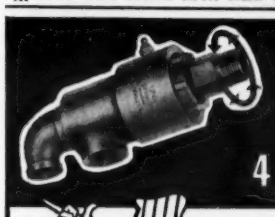
★ Quick Laboratory Service On Your Problem Markings

★ To Permanently Mark . . . Metals, Plastics, Glass, Wood, Paper, Leather, Ceramics—glazed, varnished or lacquered surfaces and virtually every other known material.

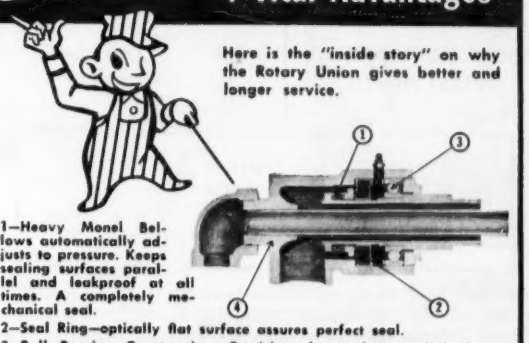
For Complete Information Phone BAker 5-8201 or write:

PHILLIPS PROCESS CO. INC.
192 MILL STREET
ROCHESTER 14, N. Y.

▲ For more details circle NED-153 F9 on enclosed inquiry slip ▲



The ROTARY UNION'S* 4 Vital Advantages



Here is the "inside story" on why the Rotary Union gives better and longer service.

1—Heavy Monel Bellows automatically adjusts to pressure. Keeps sealing surfaces parallel and leakproof at all times. A completely mechanical seal.

2—Seal Ring—optically flat surface assures perfect seal.

3—Ball Bearing Construction. Precision, heavy-duty, radial thrust type. Minimizes friction and power consumption.

4—Unique Syphon Support prevents loosening, breaking, or falling off of syphon pipe.

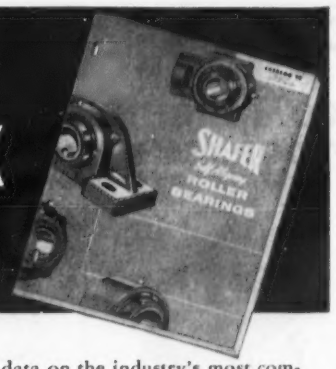
The Rotary Union needs no mechanical maintenance or adjustments . . . a positive mechanical seal . . . minimizes downtime, labor, and replacements. Pipe Sizes ¼" through 3". For full information contact our nearest office or write for Bulletin 700D.

*Trade Name—Patented

PERFECTING SERVICE CO.
332 Atando Ave. Charlotte, N. C.
Baltimore—Buffalo—Camden, N. J.—Chicago—Cleveland—Los Angeles
New York—Providence—Hamilton, Ont.—Montreal—Toronto

▲ For more details circle NED-154 F9 on enclosed inquiry slip ▲

FREE BOOK ON BEARINGS



Gives you complete data on the industry's most complete line of mounted roller bearings—Shafer.

This new Shafer catalog is compiled specifically to help you meet the increased responsibilities of building greater speed, higher load capacities and longer life into your equipment.

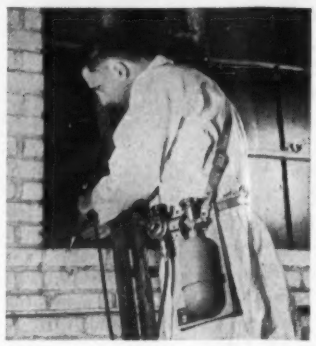
It is packed with factual information on roller bearing design—specifications, lubrication, seals and installation features that protect your equipment. Send for your free copy. CHAIN Belt Company, 4686 W. Greenfield Avenue, Milwaukee 1, Wis. In Canada: CHAIN Belt (Canada) Ltd., 1181 Sheppard Ave., East, Toronto.

SHAFER® BEARINGS
CHAIN BELT

▲ For more details circle NED-155 F9 on enclosed inquiry slip ▲

▲ For more details circle NED-157 F9 on enclosed inquiry slip ▲

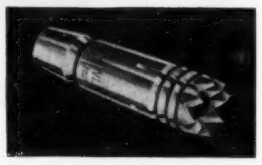
SEALANT GUN FEEDER
5-lb unit is self-contained



Application of catalyzed sealants and adhesives is facilitated with the Porta - Power - Pak, a self-contained unit that provides power for the Semco 250 Series sealant gun. It is strapped on and the gun connected to ready it for emptying at least 75 six - ounce cartridges. The 5-lb high pressure CO_2 tank with pressure regulator and pressure indicator is replaced in less than 5 min. Porta-Power-Pak, less gun and hose, sells for $68.50. Extra tank and valve are $24.95. Made by **Semco Sales & Service, Inc.**, 3141 W. Century Blvd., Inglewood 4, Calif.

▲ For more details circle **NED-160 F9** on enclosed inquiry slip ▲

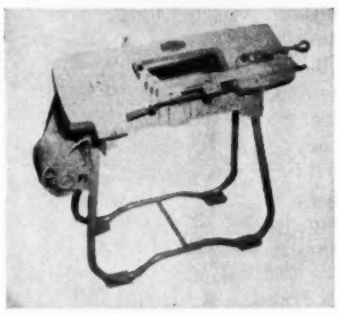
MASONRY DRILL-ANCHOR
holding power up to 17,860 lb



When used with power-operated or hand hammers, the Saber-Tooth core-action drill-anchor quickly drills its own hole in masonry or concrete. When hole has been drilled, an expander plug is placed in the drill end and the unit is driven home to the bottom of the hole. Anchor expansion over the plug secures it with up to 17,860-lb holding power. It can then be used to fasten fixtures to the concrete. Made by **Rawlplug Co.**, 248 Petersville Rd., New Rochelle, N. Y.

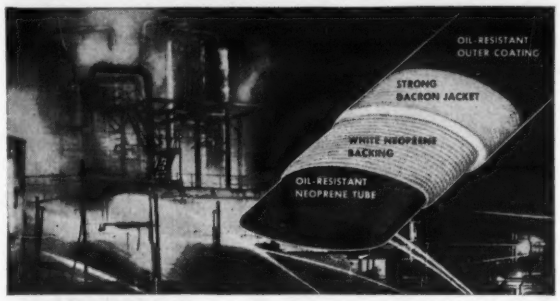
▲ For more details circle **NED-161 F9** on enclosed inquiry slip ▲

METAL-CUTTING BAND SAW
stops when cut is completed



An adjustable hydraulic cutting control for infinite variation of blade feed is built into the Excel 3 x 6-in. capacity metal - cutting band saw. Weighing only 95 lb, it has an automatic shut - off switch that stops the motor when the cut is completed. Its adjustable vise permits angular settings up to 45 degrees. Half nut clamping screw facilitates adjustment of vise jaws. Blade is ½ in. wide, 0.020 in. thick, and 60 in. long. Motor is ¼ hp, 1750 rpm, 110 v. Price is $175. Made by **Covel Mfg. Co.**, 101 N. Shore Dr., Benton Harbor, Mich.

▲ For more details circle **NED-162 F9** on enclosed inquiry slip ▲



Quaker **Thermoid** PETROCHEM FIRE HOSE
for long wear under tough chemical attack

Lightweight and flexible, "QUAKER" PETROCHEM stands up for *years* where other hose deteriorates in months. Neoprene tube and neoprene-impregnated "Dacron" jacket make PETROCHEM ideal for fire-fighting where chemical and oil exposure is greatest. Users report savings in replacement as high as 90% by switching to PETROCHEM. See your Thermoid distributor, or write *Thermoid Division, H. K. Porter Company, Inc., Tacony & Comly Sts., Philadelphia 24, Pa.*

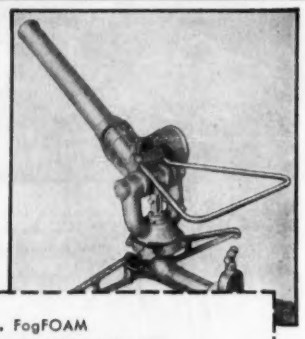
THERMOID PORTER DIVISION
H.K. PORTER COMPANY, INC.

PORTER SERVES INDUSTRY with 12 DIVISIONS including: Thermoid, Delta-Star Electric, National Electric, Riverside-Alloy Metal, Refractories, Connors Steel, Vulcan-Kidd Steel, Forge and Fittings, Disston, Leschen Wire Rope, Mouldings, and H. K. Porter Company (Canada) Ltd.

▲ For more details circle **NED-164 F9** on enclosed inquiry slip ▲

FIGHTS FIRES 4 WAYS

ROCKWOOD PORTABLE TURRET NOZZLE



Discharges:
1. FogFOAM
2. Solid FOAM Stream
3. WaterFOG
4. Solid Water Stream

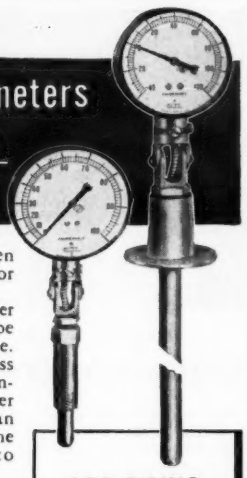
You can be sure of maximum portability *and* versatility under all fire conditions with the Rockwood Portable Turret Nozzle. Like all Rockwood Turret Nozzles, it provides 4 types of discharge, all easily adjustable on the fire line. In addition to the Portable Nozzle, Rockwood offers 3 types of Turret Control for use on mobile units: (1) Hydraulic Remote Control (2) Manual Remote Control and (3) Direct Manual Control. You'll find Rockwood Turrets on fire and crash rescue trucks, on fire boats and on hose lines . . . guarding airports, refineries, chemical and industrial plants. They're your best choice for maximum protection. For complete specifications and prices write Rockwood Sprinkler Company, 560 Harlow Street, Worcester 5, Massachusetts.

ROCKWOOD SPRINKLER COMPANY
Engineers Water . . . to Cut Fire Losses

▲ For more details circle **NED-158 F9** on enclosed inquiry slip ▲

New!

Marsh Dial Thermometers
designed expressly
for piping and ducts



Here you have everything that has been so long needed in thermometers for piping and duct work.

Big 3½" and 4½" dials are far easier to read; still more important, can be turned and tilted to *any* reading angle.

Instead of illegible, breakable glass tube, you now have the readable, unbreakable Marsh—the thermometer that gives greater *readable* accuracy than any glass tube thermometer and has the famous Marsh "Recalibrator" to *keep* it accurate.

Complete line provides for every service. Separable sockets and swivel attachment nuts make connecting and disconnecting easy. Extension necks provide for insulated piping and ducts.

FOR PIPING
Ranges: 0°—100° F, 20°—120° F, 40°—240° F and 100°—300° F. ¾" NPT male connection.

FOR DUCTS
Ranges: minus 40°—120° F, 0°—160° F, 0°—220° F. Long stems extend into ducts for accurate indication.

Also available in remote reading types with 6 ft. tubing. Same ranges, sockets, stems, dial sizes.

New bulletin covers interesting details
Jas. P. Marsh Corporation
Dept. 26, Skokie, Illinois
Marsh Instrument & Valve Co. (Can.) Ltd. • 8407 103rd St. Edmonton, Alberta, Can.

MARSH

▲ For more details circle **NED-165 F9** on enclosed inquiry slip ▲

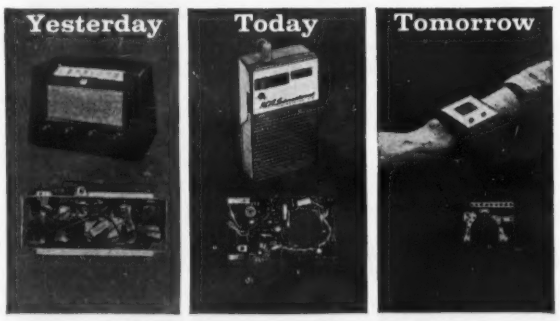
Powerful 1-2 Punch
K.O.'s HIGH WOOD-BLOCK FLOOR MAINTENANCE COSTS!

1 KRE-X SEMI-LIQUID FLOOR BOND
- Ready to use . . . easy to apply. Saves on labor, material, equipment.
- Resilient. Won't crack or chip.
- Quick setting.
- Safe . . . eliminates hot pitch hazards, tar burns.
- Cushioning action prolongs life of floor. Seals against moisture, oil, dirt. Permits limited block expansion.
- Can be applied on damp concrete.

2 PAC-A-BLOCK Palletized Floor Blocks
- Compactly strapped and shipped on disposable pallets.
- Cuts labor, handling and storage costs.
- Easy to handle, easy to install.
- Weather resistant covers for outdoor storage.
- Immediate shipment on orders of 25 to 400 sq. yds.

***WRITE TODAY** for Descriptive Bulletin*
Hayden-Shaw Mineral Products 7816 W. JEFFERSON AVE., DETROIT 17, MICH.

▲ For more details circle **NED-159 F9** on enclosed inquiry slip ▲



Miniaturize electronic components with Synthane laminated plastics

If your specifications require the use of laminated plastics in miniature circuits, be sure you have the latest information available on insulation resistance. Write for Synthane Bulletin TP9-2 for a discussion of the application of Synthane laminates to miniaturized components.

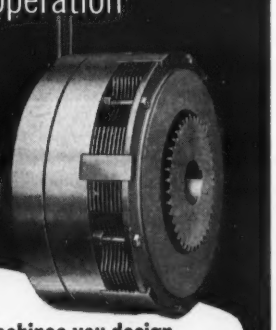
SYNTHANE

SYNTHANE CORPORATION
N.E. River Road, Oaks, Pa.
Please send me Bulletin TP9-2, containing information about the suitability of Synthane laminates for miniaturization.

Name_____
Address_____
City_____ Zone_____ State_____

▲ For more details circle **NED-163 F9** on enclosed inquiry slip ▲

better machine operation
. . . lower costs
with **Fawick Magnetics!**



Get these important clutch advantages in machines you design . . .

INSTANT RESPONSE — to automatic electrical or electronic controls in "wet" or "dry" installations.
FULL-POWER TORQUE — accurately controlled through straight-line relationship between coil voltage and torque output.
SMOOTH OPERATION — through contact action of multiple precision driving and driven discs.
COMPACT, READY TO USE — with all components assembled, ready for installation and use.

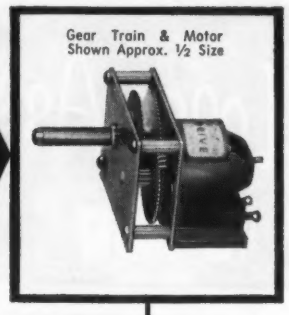
Call or write today for full information

FAWICK AIRFLEX DIVISION
FAWICK CORPORATION
9919 Clinton Rd., Cleveland 11, Ohio
In Canada, Fawick Canada, LTD., Toronto

FAWICK MAGNETIC

▲ For more details circle **NED-166 F9** on enclosed inquiry slip ▲

LOW-COST GEAR TRAINS



SMALL — LIGHT-WEIGHT
STURDY
and for almost
ANY SPEED RATIO

Manufacturers of moving displays, vending machines, turntables, instruments, scientific devices and many other items can now purchase standard or adapted gear trains for small motor operation with reduction ratios up to 1,334,838 to 1 — with little or no tooling costs.

Six standard frames — 336 styles — with steel frames, gears and shafts, brass pinions, shafts of required length and 3 types of bearings. Precision made, smooth running with minimum backlash. Complete line of motors available. And if your product requires a special gear train, we can produce it economically.

6 Standard Frames

336 Styles

RATIOS Up To More Than 1,000,000 to 1.

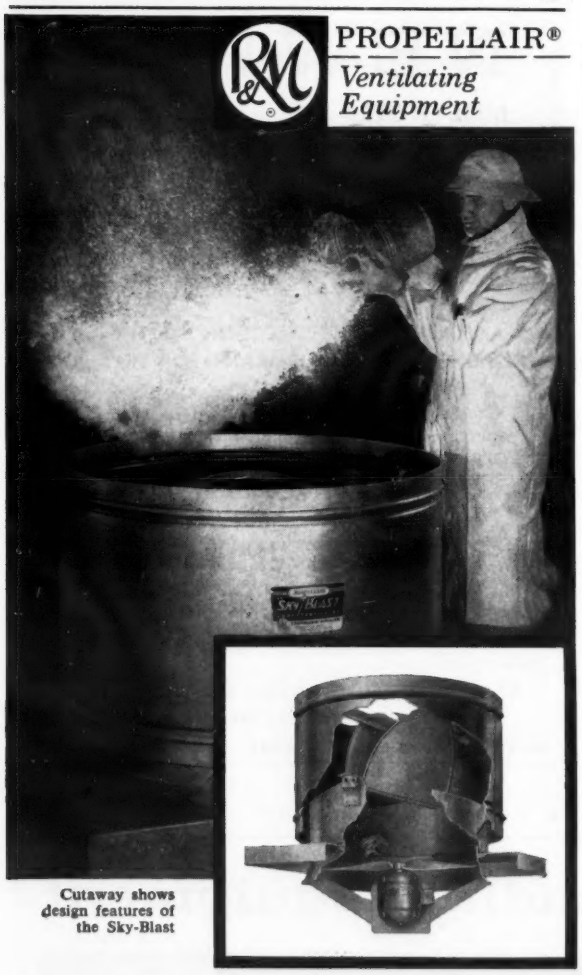
FREE TO ENGINEERS

Write for book showing styles, detailing dimensions, reduction ratios, motor voltages, quantity prices.

Wilson's of Cleveland
425 Lakeside Ave. N. W., Cleveland 13, Ohio
Specialists in Small Mechanical and Electrical Components

▲ For more details circle NED-167 F9 on enclosed inquiry slip ▲

PROPELLAIR®
Ventilating Equipment



Cutaway shows design features of the Sky-Blast

Free-Flow SKY-BLAST® Roof Ventilators are *WEATHERPROOF!*

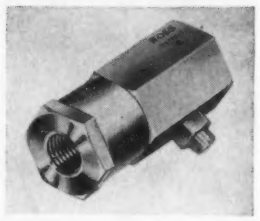
Even if the rain comes down in buckets, there's no need for weather covers on SKY-BLAST roof ventilators. In operation, the powerful airstream keeps out snow, rain and sleet. At rest, butterfly dampers form a water-tight seal, won't leak a drop. With no interfering covers, more air is moved at less cost. Fumes are thrown high in the air to prevent re-entry into the building and to eliminate roof maintenance problems created by other types of ventilators. Wind velocity or direction can't affect performance. Heavy gage steel surfaces are hot-dip galvanized for real sou'wester protection. With patented, non-clogging rainshed, low wind guard, rugged base and condensate drain, it's always fair weather beneath a SKY-BLAST. Wind tunnel proven ratings to 78,000 cfm. Send for bulletin 680—NE

PROPELLAIR®
Div. of Robbins & Myers, Inc., *Springfield, Ohio*

MOVING AIR IS OUR BUSINESS®

▲ For more details circle NED-168 F9 on enclosed inquiry slip ▲

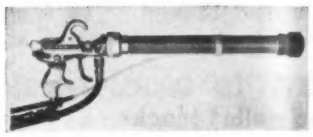
SPEED CONTROL VALVE
two sizes for 0-150 psi air service



Metering adjustment which permits five full turns from closed to full open position is provided by the Cub lightweight speed control valve. The low cost unit is offered in ⅛ and ¼-in. pipe sizes for 0 to 150 psi air service. Compact size suits it for limited space applications. Made by **Ross Operating Valve Co.**, 120 E. Golden Gate Ave., Detroit 3, Mich.

▲ For more details circle NED-169 F9 on enclosed inquiry slip ▲

ELECTROSTATIC SPRAY GUN
has adjustable atomization, pattern



Safe-to-handle Super-Charged electrostatic hand spray gun is well balanced, weighs only 2¼ lb without cable and hoses, and has standard spray gun connections. Its high voltage diminishes when the charged gun approaches a grounded object too closely, but the paint continues to be properly atomized. Degree of atomization is adjustable, as is the flat cone-shaped spray pattern. The high voltage transformer required plugs into a 110-v line and requires only 200 w to power two spray guns. Electrostatic spraying offers uniformity of paint film, coating of sheared edges, penetration into corners and recessed areas, and painting around corners with minimum operator skill. Equipment is sold outright. Made by **H. G. Fischer & Co.**, 9451 W. Belmont Ave., Franklin Park, Ill.

▲ For more details circle NED-170 F9 on enclosed inquiry slip ▲

ELECTRONIC TACHOMETER
accurate to 0.25 per cent

Magnetic pickup is employed by the Tach-Pak electronic tachometer to measure the speed of any rotating, reciprocating, or oscillating shaft or mechanism within 0.25 per cent. High sensitivity unit requires input signals no greater than 5 mv. The 0 to 5 v output drives loads up to 3000 ohms. Output voltage is directly proportional to speed or rpm of the device measured. Power source may be alternating or direct current. Molded aluminum case has barrier type terminal strips or standard AN connectors. Standard meters are available for full scale indications of 500, 1000, 2000, and 5000 rpm. Other meters may be specified. Made by **Airpax Electronics Inc.**, Seminole Div., 6601 N.W. 19th St., Ft. Lauderdale, Fla.

▲ For more details circle NED-171 F9 on enclosed inquiry slip ▲

NEW!

Short Truck for Tight Spots

36" Wheelbase plus "Safe-Hite" operator's seat.

Built for handling in confined spaces . . . narrow aisles . . . car and truck loading . . . crowded docks. Also features low operator seat for safety in low head room areas. Even on 68" high model, operator's head is always below top of uprights.

Write for facts on both 2000 and 3000 lbs. capacity models.

ELPAR
THE ELWELL-PARKER ELECTRIC COMPANY
4092 ST. CLAIR AVE. • CLEVELAND 3, OHIO

▲ For more details circle NED-172 F9 on enclosed inquiry slip ▲

FREE ANALYSIS
OF YOUR DIFFICULT MACHINING PROBLEMS

PROBLEM: reduce costs of machining this carbide knurling die. **SOLUTION:** A Raytheon Impact Grinding Analyst recommended producing the serrated portion of the die with a Raytheon Impact Grinder. **RESULT:** the die, formerly made by conventional methods and costing $265 each is now produced for $54 —saving $211 per die.

HOW YOU CAN BENEFIT—
If you have a difficult cutting, slicing, drilling, engraving or shaping problem in hard or brittle material, see your Raytheon Impact Grinding Analyst. Write Dept. NC6—without obligation.

RAYTHEON
Excellence in Electronics

RAYTHEON MANUFACTURING COMPANY
Commercial Equipment Division, Industrial Products Dept., Waltham, Mass.

▲ For more details circle NED-173 F9 on enclosed inquiry slip ▲

IF YOU USE CORRUGATED CARTONS . . .

The Bostitch D14 Wide-Crown Stapler may save you time and money

- Exclusive Quick Adjust Knob sets staples for thin board or thick
- Seals filled cartons from the outside
- Staples full-overlap, partial-overlap, end-flap —practically any corrugated carton
- Drives staples with ⅝" or ¾" legs
- Heavy-duty construction
- Completely portable—use it anywhere
- Meets Rule 41 and all parcel post and overseas shipment regulations

FREE DEMONSTRATION IN YOUR PLANT
Return the reader service card in this publication with our number circled. We'll forward detailed literature on the D14 Wide-Crown Stapler—and have a Bostitch Economy Man come to your plant for a D14 demonstration. No obligation.

Fasten it better and faster with

BOSTITCH®
STAPLERS AND STAPLES
686 BRIGGS DRIVE, EAST GREENWICH, R. I.

▲ For more details circle NED-174 F9 on enclosed inquiry slip ▲

Let This Handy
Data-Packed Catalog
Be YOUR
POWER TRANSMISSION
Guide!

Flexible Couplings
Variable Speed Pulleys
Variable Speed Transmissions
Universal Joints
Adjustable Motor Bases
Concise information on the complete Lovejoy line

GET YOUR COPY NOW!
REQUEST BULLETIN No. 1200

LOVEJOY FLEXIBLE COUPLING CO.
4823 WEST LAKE STREET, CHICAGO 44, ILLINOIS

▲ For more details circle NED-175 F9 on enclosed inquiry slip ▲

Solve
Parts Handling Problems with New "Idea File"

Here are dozens of practical solutions for simple automation!

If you're thinking of automating some of your parts handling, be sure you see Gear-O-Mation's new "Idea File". This graphic presentation contains dozens of simple, proven, time-and-money-saving ideas for every phase of automated parts handling – feeding, orienting, conveying, distributing, positioning, etc. And this line-up of parts handling techniques will suggest still further variations and adaptations to help you find the exact answer you need.

Your Gear-O-Mation field engineer carries the "Idea File" with him and he'll be happy to go through it with you. Call him or use the coupon below to arrange a showing. There is no obligation, of course.

GEAR-O-MATION
DIVISION OF
MICHIGAN TOOL COMPANY
7171 E. McNichols Rd.
Detroit 12, Mich.

AUTOMATION GEAR-O-MATION IDEA FILE

Yes! I want to see your new "Idea File" as soon as possible.

Please have your field engineer call for an appointment.

Name_____
Company_____
Street_____
City_____

▲ For more details circle NED-176 F9 on enclosed inquiry slip ▲

STANDARD INDUSTRIAL WHEELS
plastic tires carry heavy loads

Most sizes of Disowheel standard industrial wheels are available from stock, and they meet dimensional standards of the Caster and Floor Truck Manufacturers Association. Disogrin polyurethane tires reportedly have two to four times the load-carrying capacity of comparable rubber tires. Other advantages are long wear, minimum noise, and freedom from marking any floors. Tires are bonded to semisteel hubs, and wheels have roller bearings. Wheels are packed individually or in pairs in vaporproof paper and sturdy carton for storage and handling. Made by **Disogrin Industries, Inc.**, 510 S. Fulton Ave., Mt. Vernon, N. Y.

▲ For more details circle NED-177 F9 on enclosed inquiry slip ▲

SHOE-TYPE BRAKE
offered on hand pallet trucks

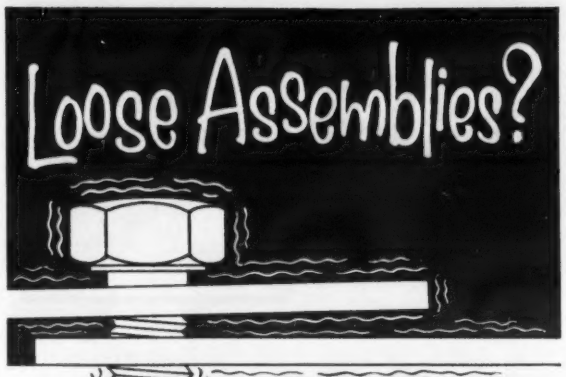
Multiton hand pallet trucks are now optionally available with shoe-type brake which is controlled by the truck's steering handle. Lined brake shoe acts against the steering wheels, stopping the truck gradually, or instantly as desired. Brake can be set as a safe parking brake, or can be completely deactivated. It is available on any Multiton hand pallet truck at cost of $35. Made by **Stokvis Multiton Corp.**, 18 Secatoag Ave., Port Washington, N. Y.

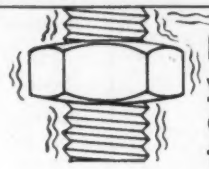
▲ For more details circle NED-178 F9 on enclosed inquiry slip ▲

ALUMINUM SCAFFOLD UNIT
adjusts to work over obstacles

All purpose aluminum scaffold unit can be rolled through doorways, lifted, assembled, and disassembled by one man. It can be adjusted to work on stairways, and arm braces allow setup over and around machines and other obstacles. The single, 77-lb unit is 6½ ft high, 28 in. wide, and 7 ft long. Expanded - aluminum work platform can be placed on any rung, and extra ladder sections in 3, 4, 5, and 6-ft lengths may be added to go higher. Made by **Bil-Jax, Inc.**, Archbold, Ohio.

▲ For more details circle NED-179 F9 on enclosed inquiry slip ▲





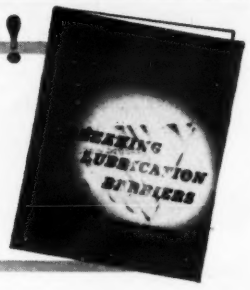
No matter what your product, we can help you solve this problem.

WRITE FOR FREE DATA ON TORQUE-TENSION RELATIONSHIPS.

SKIDMORE-WILHELM
Manufacturing Company
446 S. GREEN ROAD • CLEVELAND, OHIO

▲ For more details circle NED-181 F9 on enclosed inquiry slip ▲

NEW!
MOLYKOTE® LUBRICANT SELECTOR CHART



SIMPLIFIES THE SELECTION OF THE PROPER MOLYKOTE LUBRICANT FOR ANY JOB

- Choose your Molykote type based on temperature, environment, method of application, or application on, common materials. Charts make selection easy.
- Included is a chart of recommendations for various parts, operations & conditions.

Send for your copy of our Bulletin 121 today!

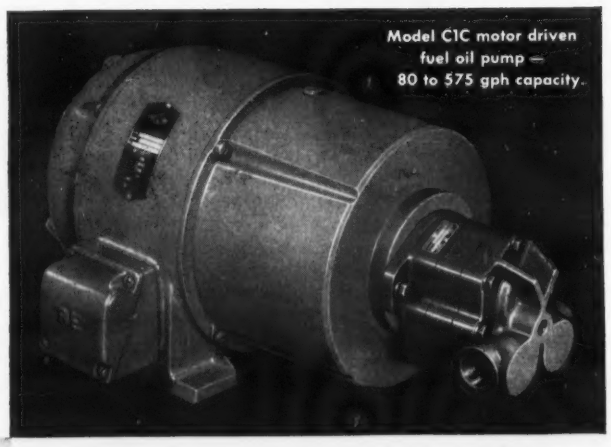
The Alpha-Molykote Corporation
65 HARVARD AVENUE • STAMFORD, CONN.
BREAKING LUBRICATION BARRIERS
. . . THROUGH RESEARCH

▲ For more details circle NED-182 F9 on enclosed inquiry slip ▲

Webster fuel oil handling equipment

from tank to burner —
a complete line for all commercial and industrial applications

Problems in handling fuel oils? High lift, big capacity, heavy No. 5 and No. 6 grades? Webster has the answer in a full line-up of pumps—supply, transfer, booster and burner models. Choose from direct drive or belt-driven units—in a wide capacity range. Webster pumps are compact, install with a minimum of plumbing. With each you get a full measure of dependable operation to match the most rugged and demanding service.



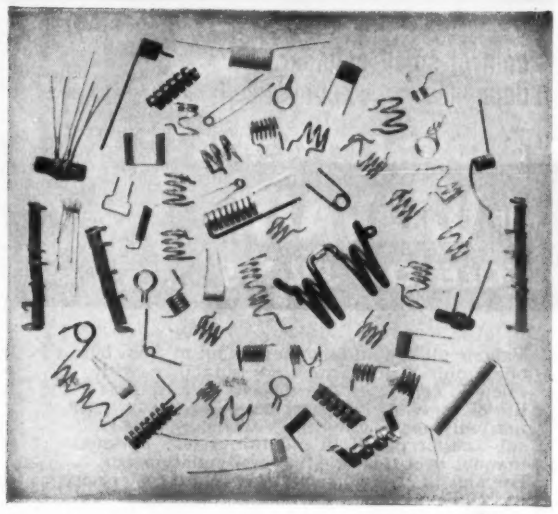
Model C1C motor driven fuel oil pump — 80 to 575 gph capacity.

RV-2000 fuel oil regulating valve
For all fuel oils — No. 1 through No. 6. Combines pressure regulation and cut-off. Capacities up to 100 gph. Pressure ranges — 80 to 150 psi, 90 to 250 psi.

call the man from Webster
— or write for engineering bulletins FU3-1, FU3-2, FU3-3

HEATING DIVISION
WEBSTER ELECTRIC
RACINE · WIS
our 50th year

▲ For more details circle NED-180 F9 on enclosed inquiry slip ▲



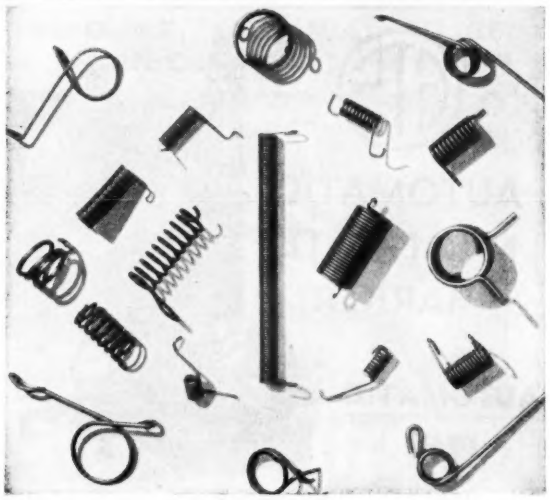
Coils, Connectors, Clips

Custom designed for use in electrical and electronic applications. Made from all metals to specific mechanical and electrical requirements. Special coatings where desired. Automatic equipment to produce varieties of shapes economically. Write for handy "Picture Book of Springs."

Associated Spring Corporation
General Offices
Bristol, Connecticut

5021

▲ For more details circle NED-183 F9 on enclosed inquiry slip ▲



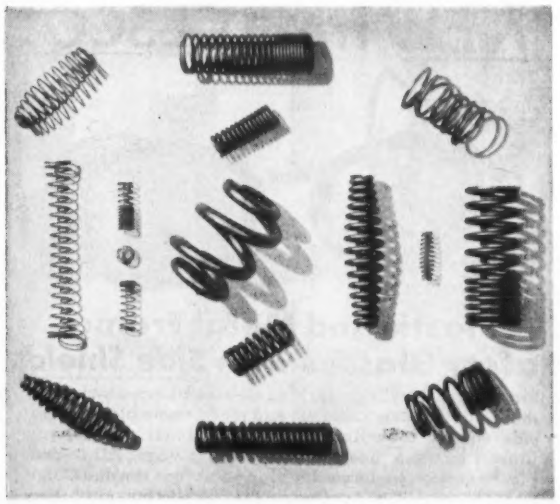
Torsion Springs

From a tiny hinge spring to a rugged auto starter spring, A.S.C. Divisions make countless varieties of torsion springs. Materials are round or flat wire wound spirally or on edge. Write for booklet "Spring Design and Selection—in brief."

Associated Spring Corporation
General Offices
Bristol, Connecticut

5022

▲ For more details circle NED-184 F9 on enclosed inquiry slip ▲



Compression Springs

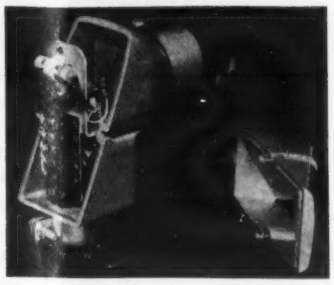
Before your designs are frozen, check with our engineers for possible savings. Proper material selection is important. Unnecessarily close tolerances add to cost. Send for pamphlet "Spring Design and Selection—in brief."

Associated Spring Corporation
General Offices
Bristol, Connecticut

5019

▲ For more details circle NED-185 F9 on enclosed inquiry slip ▲

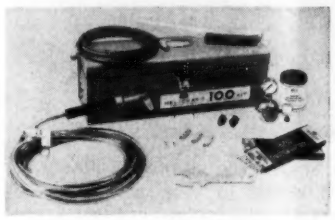
PHOTOELECTRIC RELAY
for counting or control purposes



Designed for indoor use wherever the breaking of a light beam can be used to perform a job such as counting, door opening, or control, this low cost photoelectric relay is self-contained. The 1-amp 115-v output relay operates directly from the cadmium sulfide power cell. Transformer supplies operating power to relay and light source. Unit operates up to 200 times per minute on minimum of 25 ft-c. Mounting can be at any angle or position. Made by **General Electric Co.**, 1 River Rd., Schenectady 5, N. Y.

▲ For more details circle NED-186 F9 on enclosed inquiry slip ▲

HELIWELDING OUTFIT
economical unit for manual use



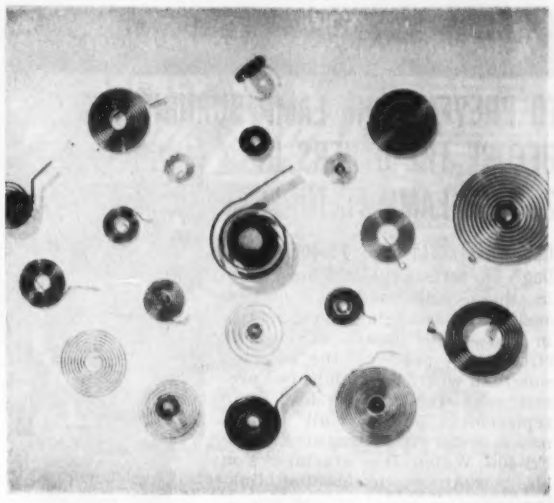
Quality welds on light gage stainless steel, aluminum, brass, copper, nickel, Monel, silver, and other nonferrous metals can be made with the economical Helicraft 100 tungsten inert-gas welding outfit. The manual unit offers high speed, minimum distortion, excellent penetration, and elimination of post-weld cleaning and grinding. Its steel carrying case contains all necessary equipment for Heliwelding in the 100-amp range and below. Various shielding gases can be used. Price is less than $100. Made by **Air Reduction Sales Co.**, 150 E. 42nd St., New York 17, N. Y.

▲ For more details circle NED-187 F9 on enclosed inquiry slip ▲

FOLDING ARM CHAIR
affords comfort

DeLuxe 3400 arm chair with "posturized" comfort folds to a flat 3 in. The arms fold simultaneously. Naugahyde, nylon, and grospoint upholstery materials over foam rubber are offered in a selection of colors. Seat is 16½ in. wide and 15 in. deep. Space between 10⅜ x 2½-in. arm rests is 17⅝ in. wide. Made by **Clarin Mfg. Co.**, 4640 W. Harrison St., Chicago 44, Ill.

▲ For more details circle NED-188 F9 on enclosed inquiry slip ▲



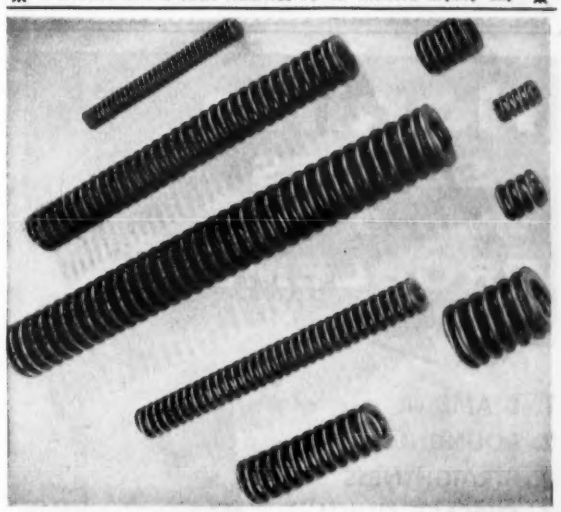
Hairsprings

Manross Division of A.S.C. is one of the oldest makers of hairsprings used in instruments, meters, gauges, watches, etc. Accuracy and dependability assured. Write for hairspring booklet giving helpful design and material selection information.

Associated Spring Corporation
General Offices
Bristol, Connecticut

5025

▲ For more details circle NED-189 F9 on enclosed inquiry slip ▲



Die Springs

Chrome vanadium die springs in stock in a wide variety of hole and rod sizes, lengths and deflections. Medium, medium-heavy, heavy duty for increased life and reduced down time. Write for list of specifications and prices, and name of nearest distributor.

Associated Spring Corporation
General Offices
Bristol, Connecticut

5026

▲ For more details circle NED-190 F9 on enclosed inquiry slip ▲

Engineering, manufacturing, and sales facilities located coast-to-coast for custom service on all your requirements

BRISTOL, Conn.
Wallace Barnes Division
Dunbar Brothers Division
F. N. Manross and Sons Division

SYRACUSE 9, N. Y.
Wallace Barnes Division
State Fair Boulevard

CORRY, Pa.
Raymond Manufacturing Division

HAMILTON, Ontario, Canada
The Wallace Barnes Company Ltd.
274 Sherman Ave. North

MONTREAL, Quebec, Canada
The Wallace Barnes Company Ltd.
Nordic Ave. at Hymus Blvd.
Pointe Claire

CLEVELAND 23, Ohio
Sales Office
22700 Shore Center Avenue

DAYTON 3, Ohio
Ohio Division
1825 East First Street

PLYMOUTH, Mich.
B-G-R Division
40300 Plymouth Road

ANN ARBOR, Mich.
B-G-R Division
401 East Stadium Boulevard

CHICAGO 14, Ill.
Gibson Division
1800 Clybourn Ave.

MILWAUKEE, Wis.
Milwaukee Division
341 East Erie Street

LOS ANGELES, Calif.
Seaboard Pacific Division
15001 South Broadway
Gardena, Calif.

SAN FRANCISCO, Calif.
Sales Office
19031 Saratoga Glen Place
Saratoga, Calif.

Wallace Barnes Steel Division
Bristol, Conn.
High Carbon Strip Steel

Associated Spring Corporation
General Offices
Bristol, Connecticut

Hints on fluorescent starter selection

TO PREVENT ONE LAMP BURNING OUT BEFORE THE OTHERS IN 2- OR 3-LAMP FIXTURES...

Use General Electric FS-400 Watch Dog* Starters. A special glow switch in these starters blocks voltage surges and damaging instant starts in the "lead" lamps of lead-lag circuits — prevents the common condition where lead lamps fail prematurely. You save on lead lamp replacement and over-all maintenance costs with General Electric FS-400 Watch Dog starters. You also get: Automatic cutout of blinking lamps — better ballast protection — up to 10 times longer starter life.

To get more money-saving hints, ask your G-E distributor for the "G-E Starter Selection Chart and Maintenance Guide For Fluorescent Lighting." General Electric Company, Wiring Device Department, Providence 7, Rhode Island.

**Registered Trade-mark of General Electric Company*

GENERAL ELECTRIC

▲ For more details circle **NED-192 F9** on enclosed inquiry slip ▲

Honing SOLVES these I.D. & O.D. PROBLEMS

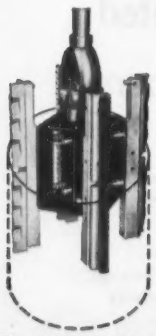
1. DIAMETER
2. ROUNDNESS
3. STRAIGHTNESS
4. SURFACE FINISH

Sunnen Honing corrects errors from previous operations such as out-of-roundness, chatter marks and taper with minimum stock removal.

Model MBB-1290D

●PRECISION HONING MACHINES

For Internal Diameter Work from stock removal to finish sizing—from deburring to micro-fitting. Range .100" through 2.750" with standard tooling; through 4½" with tooling built to order. Accuracy guaranteed to .0001". Controlled surface finish to 2 microinches. See Bulletin X-MAN-5000 I.



●PORTABLE HONES

"The tools of a thousand uses"—for internal dias. of 1¾" through 20½". Accuracy guaranteed to .0005". Controlled surface finish to 5 microinches. See Bulletin X-AN-5001E.

●EXTERNAL HONES (not illus.)

For O.D. dias. of ⅛" through 2¾". Accuracy guaranteed to .0001". Controlled surface finish to 2 microinches. See Bulletin X-MAN-5008D for details.

The Sunnen Honing Process guarantees true round and straight diameters within tolerance, and with any desired surface finish. See how this fast stock removal process increases profits by eliminating bottlenecks and cutting production costs. Ask for a demonstration. No obligation.

COMPLETE INFORMATION AVAILABLE

Ask for listed bulletins or send us data on your specific problems. We'll welcome the opportunity to be of help, without obligation.

SUNNEN® PRODUCTS COMPANY HONING

7933-F Manchester Ave. • St. Louis 17, Mo.
Canadian Factory: Chatham, Ontario

8793

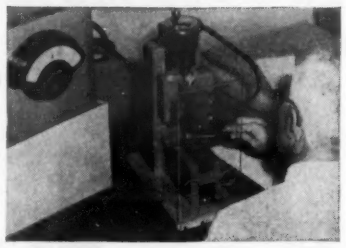
▲ For more details circle **NED-193 F9** on enclosed inquiry slip ▲

SPLINE GAGE checks effective tooth thickness

Function of five gages are combined in the Splinedicator, a gage for checking splined shafts. Unit provides an accurate check of the "effective tooth thickness," detects back taper, and is adaptable for semiautomatic gaging. It repeats to the same index position with the master to within 0.00005 in., to any index position with the master within 0.0001 in. Made by **Vinco Corp.**, 8855 Schaefer Highway, Detroit 27, Mich.

▲ For more details circle **NED-194 F9** on enclosed inquiry slip ▲

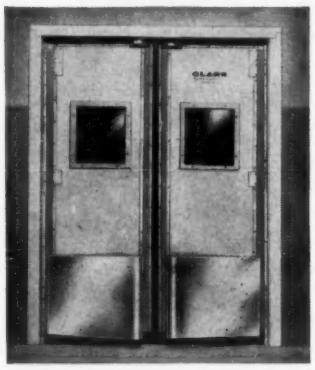
GAGE BLOCK COMPARATOR checks within 0.000001 in.



Up to 4-in. gage blocks can be measured accurately within a millionth of an inch on this Model 130 B-12 electronic comparator. Magnifications of 2000, 6000, 20,000, and 60,000 to 1 are possible with scale graduations of 0.00003, 0.00001, 0.000003, and 0.000001 in. respectively. Two sets of three balls on the precision-ground reference platen give a three-point surface for square or rectangular gage blocks. Another anvil with one side serrated and the other lapped flat can be used for parts checking. Made by **Federal Products Corp.**, 1144 Eddy St., Providence 1, R. I.

▲ For more details circle **NED-195 F9** on enclosed inquiry slip ▲

SHOCK ABSORBER DOOR withstands pounding by fork trucks



Resilient urethane-filled bumpers take the full impact of heavily laden fork trucks without damage to the self-closing shock absorber door. Trucks never touch the door proper. Flexibly suspended hinges uniformly distribute stress over the length of the door on both sides. Spring return at the top assures tight, accurate closure after each opening. Drafts and noises are eliminated by neoprene seals. Easily installed door will fit standard openings. Made by **Clark Door Co.**, 515 Hunterdon St., Newark 8, N. J.

▲ For more details circle **NED-196 F9** on enclosed inquiry slip ▲

"Key" POINTS

- 1000 counts per minute
- large white figures on dark background
- maximum visibility
- hardened steel working parts throughout
- compact — 5½" long, 2-9/16" deep, 2⅛" high
- 100-120 volts, 60c. A.C.
- voltage fluctuations cannot affect accuracy of count
- attractive finish — Alaska Grey and Seal Brown

Send for Catalog 55

only a KEY MAN can RESET the

DURANT MODEL 6-Y-1-2-MF
Tumbler Lock Reset Electric
PRODUCTIMETER
for Panel Mounting

The entire assembly can be placed into the panel and securely mounted from the front. Counter is completely enclosed, fully protected against dust and moisture.

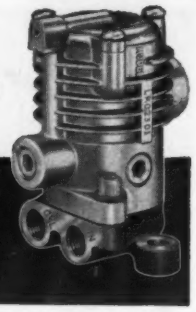
Representatives in Principal Cities
DURANT MANUFACTURING CO.
1922 N. Buffum St. Milwaukee 1, Wis. — 22 Thurbers Ave. Providence 5, R. I.

PRODUCTIMETERS SINCE 1879 *Count Everything*

▲ For more details circle **NED-197 F9** on enclosed inquiry slip ▲

---

control small cylinders dependably . . . economically



with VALVAIR® SOLENOID PILOTS

Valvair pilots handle cylinders up to 2 in. bore . . . offer multi-million cycle dependability, with solenoid coils guaranteed against burn-out for the life of the valve. Choose from 2 or 3-way types, normally open or normally closed . . . foot, sub-base or manifold mountings . . . optional manual over-ride and integral junction box. For air, oil, water, vacuum or inert gas service . . . coils for ac or dc, any voltage.

Solve your small cylinder control problems with Valvair solenoid pilots.

Write for free Bulletin D-58. Address: Valvair Corp., Akron 11, Ohio, Dept. NED 659

Valvair AKRON 11, OHIO
DIVISION OF INTERNATIONAL BASIC ECONOMY CORPORATION (IBEC)
Other INDUSTRIAL DIVISIONS of IBEC: The Sinclair-Collins Valve Co. The Bellows Co., Akron, Ohio • V. D. Anderson Co., Cleveland, Ohio.

6019

▲ For more details circle **NED-198 F9** on enclosed inquiry slip ▲

GTS

AUTOMATIC NAMEPLATE MARKER with AUTOMATIC FEED

This GTS unit marks nameplates at the rate of 3000-36000 per hour with perfect uniformity. Operator merely loads the automatic feed and unloads the discharge stacker. Machine can be equipped for consecutive serial numbering. Inquire at GTS for the finest in marking equipment.

IF IT'S WORTH MAKING, IT'S WORTH MARKING.

GEO. T. SCHMIDT, INC.
1800 W. Belle Plaine Avenue
Chicago 13, Illinois

▲ For more details circle **NED-199 F9** on enclosed inquiry slip ▲

NEW from CESCO!

Plastic and Metal Frame Safety Glasses with *Side Shields*

First in smart styling... first in all-around eye protection, these popular CESCO plastic and metal frame glasses with side shields look like attractive personal glasses, yet protect like the most rugged safety glasses. All-in-one plastic section performs double duty as lens rim and Comfort Bridge pad. Full closure at nose section plus wire mesh side shields give eyes protection from any angle.

In 2 sizes • 46 x 39mm (No. 336) • 48 x 41 mm (No. 338)
Shape of Lens • F-7 in clear and anti-glare safety glass and Cescolite plastic
4 Bridge Sizes • 20, 22, 24 and 26 mm

***ASK** your distributor to show you his complete line of CESCO head and eye protective equipment. There's a CESCO distributor located in most major cities coast-to-coast.*

CHICAGO EYE SHIELD COMPANY
2715 W. Roscoe St., Chicago 18, Illinois

▲ For more details circle **NED-200 F9** on enclosed inquiry slip ▲

NEW Top Quality...Low Price

BT FULLY HYDRAULIC PALLET TRUCKS

ONLY $350.00 (F. O. B. CHICAGO)

Now you can have quality at the lowest price of any hand operated, full hydraulic, fork-type Pallet Truck on the market. Designed to answer the majority of Pallet transportation problems, the 2,400 and 4,400 pound capacity Pallet Trucks are quality manufactured, extra-sturdy, yet light weight.

- SHORT WHEEL BASE
- ACCURATE STEERING
- 3¼" LOWERED HEIGHT
- EFFORTLESS OPERATION
- COMPACT
- 5" LIFT

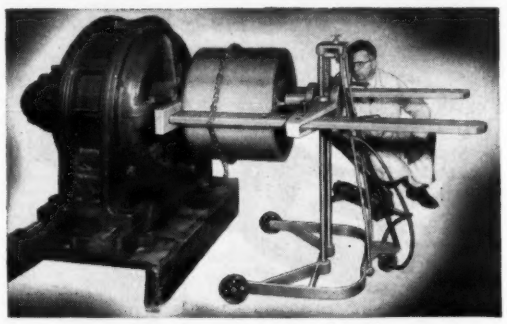
ORDER BY MODEL NO.
MODEL BT 24 $350.00
2400 lb. Cap. .....
MODEL BT 44 $395.00
4400 lb. Cap. .....
Both models available in 20" and 27" widths; 36", 42" and 48" lengths. Specify when ordering.
Dealer Inquiries Invited

Write — Phone — Wire

INDUSTRIAL HANDLING EQUIPMENT CO.
1221-23 W. Monroe St., Chicago 7, Ill. • MOnroe 6-8554

▲ For more details circle NED-201 F9 on enclosed inquiry slip ▲

THE QUICK, EASY WAY TO REMOVE AN OBJECT FROM A SHAFT!



This Powerful, Hydraulic

PULLEY PULLER

For Removing Pulleys, Wheels, Gears, Couplings, Sheaves, etc.

One man can do it in minutes — even if objects are stuck fast. No crowbars, sledges, or torches. No damage to equipment. Puller is adjustable — easy to move — rugged. Hundreds being used in industry.

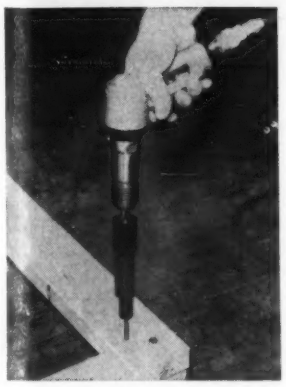
- 5-ton size on wheels $122.00
- 20-ton size on wheels $368.00
- 50-ton size on wheels $830.00

F.O.B. Factory, New Quicklink chain and set of ten ram adaptors at slight additional cost.
Write for complete information - Catalog E

INDUSTRIAL ENGINEERING EQUIPMENT CO.
122-124 E. 4th St. Davenport, Iowa

▲ For more details circle NED-202 F9 on enclosed inquiry slip ▲

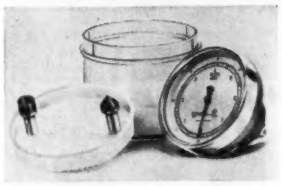
NAILING ATTACHMENT
handles 8 to 60-penny nails



This nailing attachment for use with company's heavy-duty air hammers can drive a 16-penny nail into oak in 2.8 sec. It handles 8 to 60-penny nails and 8, 10, or 12-in. spikes. Nailer is suitable for toe or overhead nailing, furring, flooring, siding, decking, and blind spots on crating, packing, and pallets. Attachments are available for the Bantam Bully air hammer line and all other hammers using a 401 round shank. Made by **Superior Pneumatic & Mfg., Inc.**, 4758 Warner Rd., Cleveland 25, Ohio.

▲ For more details circle NED-204 F9 on enclosed inquiry slip ▲

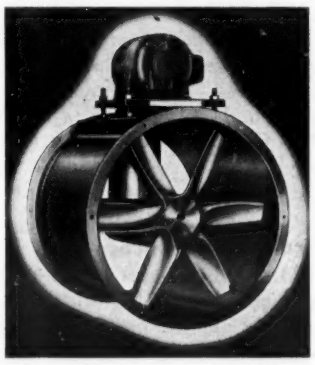
HAND TACHOMETERS
indicate direction of rotation



Small in size and weighing less than 9 oz, Magna Tak eddy current hand tachometers have an accuracy within ±1 per cent. They indicate direction of rotation, have a spindle mounted on sealed ball bearings, and feature only two moving parts. Four speed ranges offered are 0-2000, 0-4000, 0-6000, and 0-8000 rpm. Made in West Germany, tachometers are packaged in a plastic container with concave and convex neoprene adapters. Available from **Boulin Instrument Corp.**, 10 First St., Pelham, N. Y.

▲ For more details circle NED-205 F9 on enclosed inquiry slip ▲

BELT-DRIVE DUCT FANS
have variable speed drive sheave



Simple adjustment of variable drive sheave on these belt-drive duct fans slows fan down to reduce air deliveries by as much as one-third. Standardized components are used within each fan size. Thus, only motors need be changed to meet changing air delivery needs. Units of the same duct diameter use the same duct, bearing cover, assembly base, shaft, and bearings. Made by **Hartzell Propeller Fan Co.**, 1025 Roosevelt Ave., Piqua, Ohio.

▲ For more details circle NED-206 F9 on enclosed inquiry slip ▲

SPOT BOX CARS QUICKLY... EASILY ...SAFELY WITH

ONE MAN and an...

S-A Horizontal Style 14H CAR PULLER

MORE QUALITY FEATURES

- Greater safety factor for personnel . . . no rope to snub with wire rope car puller.
- Save time, labor and money . . . one man can quickly and easily spot several fully loaded box cars.
- A type and size to fit your exact requirements.
- Rugged construction for trouble free service.
- Stocked for immediate delivery.

S-A

WRITE FOR BULLETIN 753
STANDARD PRODUCTS DIVISION
STEPHENS-ADAMSON MFG. CO.
12 RIDGEWAY AVENUE • AURORA, ILLINOIS
PLANTS LOCATED IN: LOS ANGELES, CALIFORNIA CLARKSDALE, MISSISSIPPI • BELLEVILLE, ONTARIO

▲ For more details circle NED-207 F9 on enclosed inquiry slip ▲

TURCO-SOLV

THE PERFECTLY BALANCED SAFETY SOLVENT

Spray-cleans motors, generators, equipment—safely & efficiently

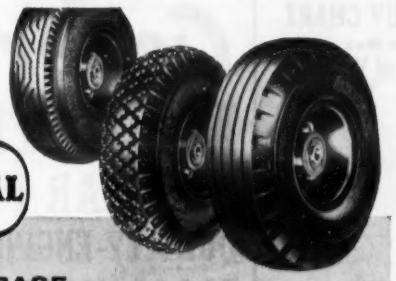
The only safety solvent with a built-in detergent additive, Turco-Solv is the perfect balance of cleaning efficiency, safety and evaporation rate. With Turco-Solv, there's no danger of fire or explosion—even in the critical final 10% of evaporation. There's no chance of damaging insulating varnish, no noxious vapor.

Turco-Solv is an all-purpose solvent that is also ideal for a host of other maintenance chores. Yet, for all this safety and super-efficiency, you pay no premium price.

There's much more to be told about this amazing cleaner. Write today for your free copy of Turco's brochure, "The Story of Safety Solvents."

TURCO PRODUCTS, INC.
Chemical Processing Compounds
6135 S. Central Ave., Los Angeles 1, California
Factories: Newark, Chicago, Houston, Los Angeles, London, Rotterdam, Sydney, Mexico City, Paris, Montreal, Hamburg, Manila, Naha (Okinawa)
Manufactured in Canada by B. W. Deane & Co., Montreal
Offices in all Principal Cities

▲ For more details circle NED-203 F9 on enclosed inquiry slip ▲



THE GENERAL TIRE

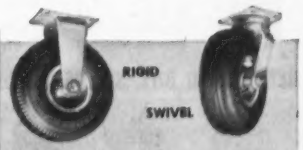
WIDE-BASE PNEUMATICS BY

GENERAL

SAVE TIME, LABOR, MONEY!

Under all job and load conditions, long-wearing General Wide-Base Pneumatics are tops for dependable high-speed performance. Featuring high flotation for easier rolling, they cushion loads and equipment, save high cost floors and floor surfaces, give you greater load capacity. You'll find the exact design you need in General's complete line.

Available separately or in assemblies of tires, tubes and wheels. Size O.D. 8" to 35"—200 to 7890 lbs. capacity for low or high speeds.



CASTER FORKS

Available in identical pairs in a wide range of sizes, these wide-base caster forks are engineered to carry heavier loads without adding dead weight to equipment.

SEND FOR CATALOG, DEPT. 4

THE GENERAL TIRE & RUBBER CO. • AKRON, OHIO

▲ For more details circle NED-208 F9 on enclosed inquiry slip ▲

Service men all across the country agree . . . there's no other screw driver or nut driver with the built-in comfort of the VACO "comfordome" handle. Makes service work easy! Enjoy the luxury grip of a VACO . . . the driver that gives plenty of power, yet is always kind to hands. Next time choose a VACO and *feel the difference!*

Manufactured and Unconditionally Guaranteed by
VACO PRODUCTS CO., 317 E. Ontario St., Chicago 11, Ill.
In Canada: VACO-LYNN PRODUCTS CO., LTD., Montreal 1, Que.

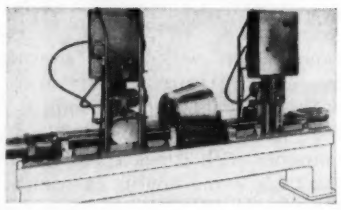
▲ For more details circle NED-211 F9 on enclosed inquiry slip ▲

AIR-HYDRAULIC PUNCH PRESS rated 10 tons on 65-75 psi air line

Fast, economical hole punching in angles, channels, extrusions, and sheet, plus notching operations, can be performed by Model 1012 Unipunch press. Available with the press are 37 round punches and 74 dies with four hole-punching units and one notching unit. Small die sets can be installed for making stampings. Heeled punches and dies are available for "hogging" out holes larger than the 2-in. diameter maximum provided with standard punching units. Unit operates at 10-ton capacity from 65-75 psi air line pressure. Throat depth is 15½ in. without gaging. Standard gaging is 24 in. from ram center to the left and 12 in. front to back. Gaging over 24 in. long is available. Made by **Punch Products Corp.**, 3800 Highland Ave., Niagara Falls, N. Y.

▲ For more details circle NED-213 F9 on enclosed inquiry slip ▲

DEEP HOLE DRILL UNIT for depths up to 24 in.



Accurate 3/32 to ⅝-in. blind or through holes can be drilled to depths up to 24 in. by the Model 2400-A deep hole drilling unit. Ball bearing mounted spindle is powered by a 3600-rpm Dynabrake motor and timing belt drive, and accommodates standard ¾-in. Pratt & Whitney gun drill shank. Rapid return is powered by a ½-hp Dynabrake motor. Spindle speeds are synchronized with feeds. Possible modifications include larger spindle, increase in stroke in 12-in. increments, and a cast or fabricated base with built-in pressure coolant system. Special fixturing can be ordered. Photo shows two opposed models operating simultaneously on a single workpiece. Made by **20th Century Machine Co.**, 6070 E. 18 Mile Rd., Utica, Mich.

▲ For more details circle NED-214 F9 on enclosed inquiry slip ▲

Grouting Practices

Master Builders Co.—How to avoid shrinkage, the principle cause of grout failure, through the use of properly applied nonshrink grout is the subject of 16-page illustrated bulletin. Successful grouting techniques with Embeco grout, practices used with different types of equipment, and mixing and estimating information are included.

▲ For more details circle NED-215 F9 on enclosed inquiry slip ▲

NEW

COMPOSITE STAYNEW FILTER CATALOG OFFERED FREE

Now you can refer to this one concise catalog for information on all Dollinger Staynew Filters. It describes applications and shows construction details of each of the following:

- INTAKE FILTERS
- PIPE LINE FILTERS
- LIQUID FILTERS
- AUTOMATIC FILTERS
- DRY PANEL FILTERS
- VISCOUS PANEL FILTERS
- ELECTROSTATIC FILTERS

Dollinger also makes all types of special filters . . . consult your local Dollinger representative. But, write today for composite filter catalog. Dollinger Corporation, 49 Centre Park, Rochester 3, N. Y.

STAYNEW FILTERS DOLLINGER
Specializing in dry type filters for 35 years

▲ For more details circle NED-217 F9 on enclosed inquiry slip ▲

BUY CHART for Men of Vision

General NOW OFFERS POPULAR PRICE QUALITY-ENGINEERED FLOOR MACHINES!

BE SURE TO SEE GENERAL BEFORE YOU AUTO-MATE YOUR FLOOR MAINTENANCE!

GENERAL KC Extra Heavy Duty Machines with all these deluxe quality PLUS features:

1. FULLY ADJUSTABLE HANDLE.
2. BIG 6" SEMI-PNEUMATIC WHEELS.
3. LUXURIOUS WHITE RUBBER WRAP-A-ROUND BUMPER.
4. DUAL AUTO-MATE SAFETY SWITCH.
5. NON-MARKIT GREY RUBBER CORD.
6. UNSURPASSED FUNCTIONAL DESIGN.
7. HEAVY DUTY CAPACITOR-START TYPE MOTOR.

GENERAL KL Dyna-Craft Mid-weight Machine.

13" diameter operating brush spread. *Portable!*

Full range of sizes — from 13" to 23" diameter operating brush spread.

GENERAL Heavy Duty Wet and Dry E-CON-O-VAC Commercial Vacuum Cleaners.

GENERAL TWIN BRUSH MACHINES
T-16B—for Motels, Stores, etc.
Twin-12A—for Home use.

BEFORE YOU BUY, SEE GENERAL! There's a BIG difference in floor maintenance equipment!

General FLOORCRAFT, INC.
3630-50 Rombouts Ave., Bronx 66, N.Y. Established 1930
World's Most Complete Line of Industrial and Household Floor Maintenance Machines and Vacuums
All Sizes for All Types of Floors — Made by Floor Machine Specialists

Generals are Feature-Filled! MAIL COUPON for complete details

☐ Have Distributor call on us.
☐ Send complete information, literature and prices.
☐ Floor and Rug Cleaning Machines ☐ Vacuums
NE-6
Company_____
Street_____
City_____ State_____
My Name_____ Title_____

▲ For more details circle NED-212 F9 on enclosed inquiry slip ▲

SAVE MONEY BENDING THE EASY TAL BENDER WAY

Be practical — only Hein-Werner Tal Benders offer unique performance features which permit saving up to 75% of time and labor costs. You choose the exact size or combination that's best for you to bend ⅜" to 8" material smoothly, uniformly, without distortion. One frame handles all pipe, tubing and conduit quickly and easily in just one setting. Fewer parts speed assembly and set-up. Properly formed bending shoes in 64 different radii and sizes assure perfect identical bends. Special shoes to individual specification. Ram construction is extra-strong and designed with exclusive, effortless pipe release. Units may be manually operated or equipped with high-speed motor pump. Write for detailed Catalog No. 35, or see your individual distributor.

Hein-Werner CORPORATION WAUKESHA, WISCONSIN

▲ For more details circle NED-216 F9 on enclosed inquiry slip ▲

A CONVERTIBLE PIPE CUTTER

REED

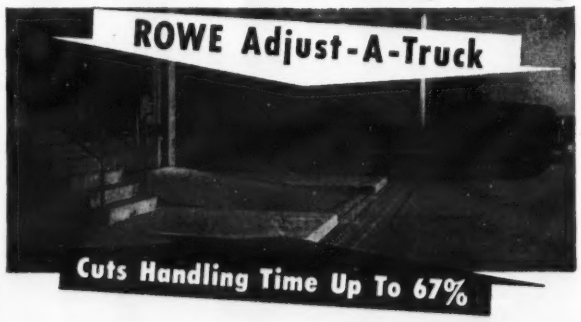
● Quick, easy change-over transforms Roller Cutter into a 4-wheel cutter for ditch and other close-area work. These new Reed cutters—whether in Roller, 3-wheel or 4-wheel models — are the world's easiest, cleanest cutting tools in their size ranges. Roller model has cutting wheel in block where it remains for full sight lining up with cut-off mark. Operating with easy, ratchet-like action through one-fourth of a revolution, Reed 4-wheel model is best for close quarters work. In three capacities for pipe sizes from ⅛" to 3". Razor Blade wheels by Reed leave minimum burr, cut easier.

ASK YOUR SUPPLIER OR WRITE FOR FREE LITERATURE.

REED MANUFACTURING COMPANY
ERIE • PENNSYLVANIA, U. S. A.

▲ For more details circle NED-218 F9 on enclosed inquiry slip ▲

Move Greater Pay Loads . . . Faster, Safer With Money Saving



. . . Saves Man Hours And Dock Space

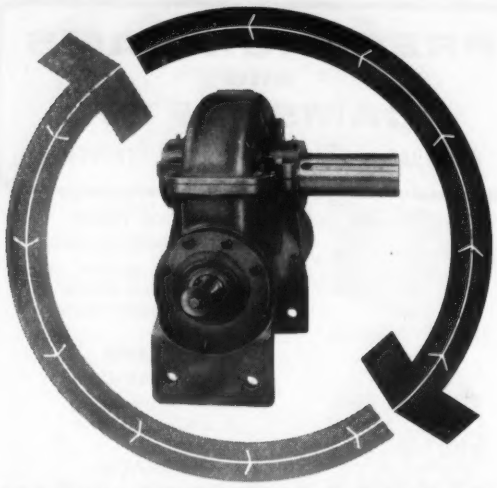
■ Here's the low cost answer to positioning any highway carrier to proper dock height when it is impossible to use dock leveling ramps because of construction or space limitation. This 40,000 lb.-capacity hydraulic truck leveling device has 24" up-down travel and features: Low Initial, Installation and Operating Cost • Short Amortization Period • Rugged Construction for Long-Life Service • Minimum Maintenance • Exceptional Ease of Operation.

Write for our new folder — It's free of course

See us at The Material Handling Exposition June 9-12, Booth 2009

ROWE METHODS, INC.
2534E Detroit Ave. • Cleveland 13, Ohio

▲ For more details circle NED-219 F9 on enclosed inquiry slip ▲



TULSA SPEED REDUCERS

• Low Cost • Compact • Heavy Duty • Worm Gear

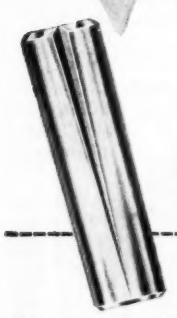
Economize on speed reduction costs with Tulsa Speed Reducers. For intermittent heavy duty operation at slow speeds, you can't beat Tulsa Speed Reducers for initial low cost, minimum maintenance and outstanding performance. A wide range of models is available with maximum output torques ranging from 875 to 26,000 pound-feet. Some models available with automatic worm brake. For complete information write for Bulletin No. SR-56.

TULSA WINCH
DIVISION OF VICKERS INCORPORATED
TULSA, OKLAHOMA

▲ For more details circle **NED-220 F9** on enclosed inquiry slip ▲

have you checked

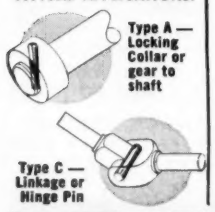
DRIV-LOK PIN *advantages?*

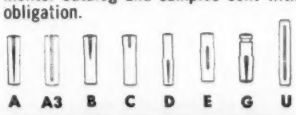


1. **Positive anchoring . . . once in they *stay in* . . . yet they're re-usable**
2. **Stronger, safer, solid body**
3. **Quick installation . . . Lower Costs**

DRIV-LOK Pins are effecting great economies and product improvement in applications of every type. Easy to install — just drill the hole and press or drive them in. The job is done — no reaming, no expensive hole preparation. Available in carbon steel in 8 standard types; also a wide variety of special materials. Write us, describing your fastening requirements. Catalog and samples sent without obligation.

TYPICAL APPLICATIONS:

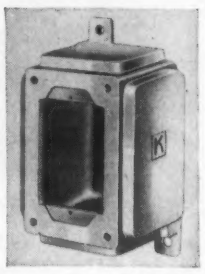




DRIV-LOK SALES CORPORATION
717 Park Avenue • Sycamore, Illinois

▲ For more details circle **NED-221 F9** on enclosed inquiry slip ▲

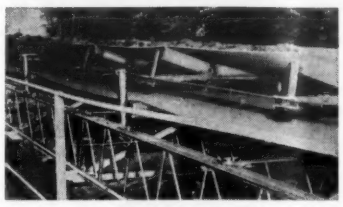
JUNCTION BOXES
of explosionproof construction



Various types of switches, push-button stations, pilot lights, and other electrical devices can be mounted in Series US and UD universal junction boxes. They are made of aluminum alloy and have ample wiring room. Hub blanks can be drilled and tapped for ½, ¾, and 1-in. conduit. Explosionproof boxes are designed for Class I, Group C and D, and Class II, Group E, F, and G applications. Made by **Killark Electric Mfg. Co.**, Vandeventer & Easton Avenues, St. Louis 13, Mo.

▲ For more details circle **NED-223 F9** on enclosed inquiry slip ▲

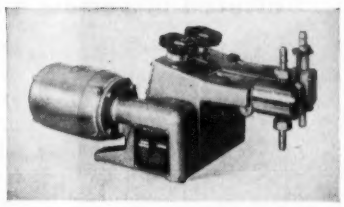
NONRIGID BELT CONVEYOR
rope side frames center load



Idler positioned above the rope side frames is employed by the nonrigid, portable Lo - Rope belt conveyor. This mounting automatically centers the load, eliminates spillage, and offers 27-degree troughing for high carrying capacity. Wide spacing between idlers minimizes maintenance and replacement costs. Adjustable height platform rocker support stands for the rope minimize blocking and level the belt. Ropes, support stands, and idler connections to the rope are out of the way of the carrying run. Made by **Long Co.**, Box 331, Oak Hill, W. Va.

▲ For more details circle **NED-224 F9** on enclosed inquiry slip ▲

METERING PUMP
for liquids and gases



Volume per stroke delivered by this laboratory, metering, or proportioning pump can be independently controlled from zero to maximum while running. Its 95 strokes per minute can be varied in length from 0 to 19/32 in. for pumping neutral or corrosive liquids and gases against fluid pressures to 28.5 psi. Demountable pump bodies of ceramic, tempered glass, or Teflon have ceramic plungers. The transmission operates in oil and is separated from the pistons to eliminate contamination. With a dual pump, fluid can be metered in one section and gases with the other. Single and dual laboratory and multiple heavy industrial models are available. Available from **C. H. Stoelting Co.**, 424 N. Homan Ave., Chicago 24, Ill.

▲ For more details circle **NED-225 F9** on enclosed inquiry slip ▲

NEW *and* needed

JUNIOR CYCLONE DUSKOLECTOR

by Hammond

Model JC8-4 is easy to install and can be mounted on casters for portability.

The NEW Hammond Junior Cyclone DusKolector provides a low-cost means of collecting dust from light and medium dust sources. It also fits in where filter dust collectors have not been satisfactory.

Built to usual Hammond standards, it has the same features as the larger Cyclone DusKolectors. Blower wheel is *self-cleaning paddle type*, dynamically balanced and mounted on the exhaust, not the inlet side. Bag has zipper for quick cleaning. Two sizes available, giving 400 or 600 CFM.

Where to use Cyclone DusKolectors — machine shops and tool rooms for collecting cast iron dust from mills, lathes, surface grinders, tool and cutter grinders, internal grinders, etc. Polishing and buffing departments, crating rooms, grinding departments and other dust producing sources.

Hammond DusKolectors Don't Cost, They Pay — by providing healthier working conditions, protecting costly machine tools and reducing cleaning and painting costs.

Write for Catalog

Hammond Machinery Builders INC.
1623 DOUGLAS AVENUE • KALAMAZOO, MICHIGAN

See Us at the Industrial Finishing Expo.—June 15-19—Detroit—Booths 261-266

▲ For more details circle **NED-226 F9** on enclosed inquiry slip ▲

Almost Anyone Can Make Solenoid Parts, But . . .

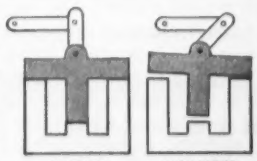
Headache-Free Solenoid **Application** Takes Machine Tool Precision

There may be solenoid application problems that we can't solve, but . . . we have yet to find one. It's simply because we are machine tool builders and fully understand the basic problems of converting electrical energy to mechanical energy. It's the reason why Namco solenoids have superior electrical and mechanical characteristics and why we can assure you of the one other factor that *truly* determines solenoid life . . . *proper application.*

Custom-engineered solenoids in every size, capacity and type can be made to meet your specifications. Write us for complete information.

For Example:

Operating in an arc without proper linkage will cause incorrect seating of the plunger . . . allowing the solenoid to draw partial inrush current continuously. This will cause overheating and eventual malfunction of the solenoid.



National Acme

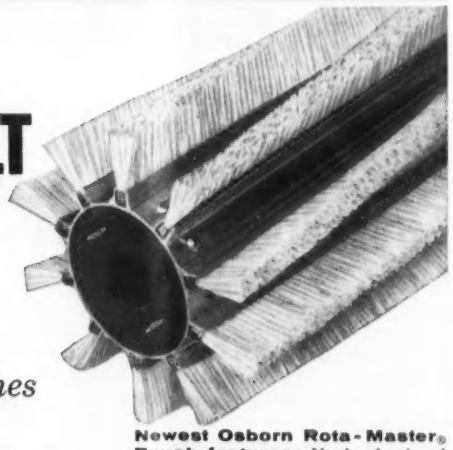
THE NATIONAL ACME COMPANY
182 E. 131st STREET
CLEVELAND 8, OHIO

Sales Offices: Newark 2, N. J., Chicago 6, Ill., Detroit 27, Mich.

▲ For more details circle **NED-227 F9** on enclosed inquiry slip ▲

OSBORN®

HOW TO END CONVEYOR BELT CLEANING PROBLEMS



Unique OSBORN ROTA-MASTER® brushes do the job automatically . . . can cut your downtime and maintenance costs now

CARRYOVER on rubber and fabric conveyor belts can cause destructive wear—and add costly downtime hours spent in frequent cleaning. Osborn Rota-Master® Brushes automatically and efficiently prevent buildup of such materials as chemicals, food, tobacco, chips, core sand, coke and ore on belts, rolls, snubber pulleys and return idlers.

Easy to install and adaptable to any system—Rota-Master Brushes clean conveyor belts with a unique, flexible sweeping action that does a thorough job. Brushes are self-cleaning, simple to adjust for correct brushing pressures.

Write for details to help pinpoint exactly how you can cut costs and simplify your conveyor cleaning. *The Osborn Manufacturing Company, Dept. N-8, Cleveland 14, Ohio.*

Newest Osborn Rota-Master® Brush features: Newly developed KORFIL®P fill material is extra-rugged . . . cleans more thoroughly, wears longer. New lightweight mounting is easier to handle and install. Mounting is re-usable . . . replacement strips easily inserted. In 16", 18", 24" face widths. Assemble in multiples for any belt size.

Write For Rota-Master® Brush Booklet . . . includes complete application, specification and operational data for all types of conveyor belt cleaning requirements.

Osborn Brushes

POWER, PAINT AND MAINTENANCE BRUSHES • BRUSHING METHODS • BRUSHING MACHINES FOUNDRY PRODUCTION MACHINERY

▲ For more details circle **NED-222 F9** on enclosed inquiry slip ▲

AMEs

Masters of Measurement

PORTA-CHECK®
A transistorized comparator for fast, accurate measurement to .00001".

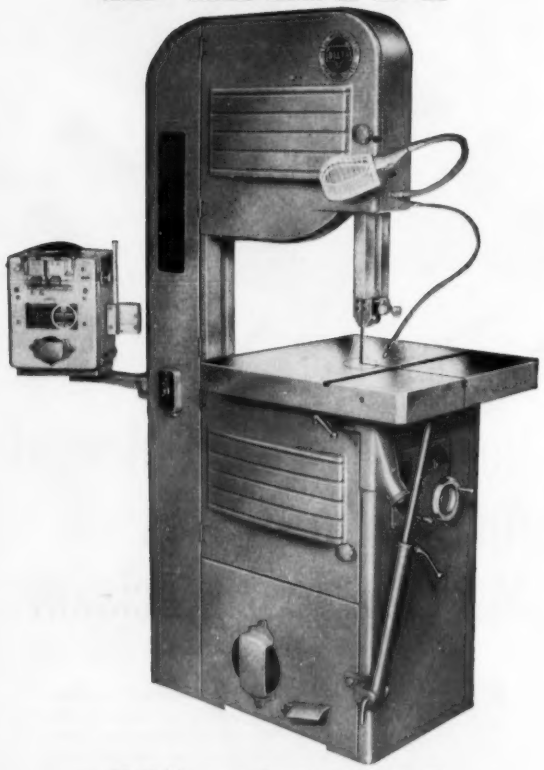
200 SERIES
One of four sizes; made to AGD specifications.

For more than half a century, Ames measuring instruments have been regarded as the finest available. Wherever precision is *really* important . . . you'll find Ames indicators, gauges, micrometers and comparators on the job.

Representatives in Principal Cities

B.C. AMES CO.
34 Ames Street, Waltham 54, Mass.
Canadian Office — B. C. Ames Co., 45 Oriole Parkway, Toronto
MANUFACTURERS OF MICROMETER DIAL INDICATORS AND GAUGES
▲ For more details circle **NED-228 F9** on enclosed inquiry slip ▲

NEW from DELTA



20" metal-wood
Variable Speed
BAND SAW

Now you can have the Band Saw features you said you wanted most—*and for less than $900!* This all-new Delta Band Saw (shown with optional blade welder) gives *greater accuracy, better cutting performance* with:

WIDE RANGE VARIABLE SPEED DRIVE—50 to 4500 FPM—cuts stainless steel, aluminum, wood, plastics.

SCIENTIFICALLY DESIGNED BLADE GUIDES—give maximum blade support for heavy metal cutting.

RUGGED FRAME CONSTRUCTION—massive, rigid internal frame with modern fabricated exterior.

SEE IT AT YOUR NEAREST DELTA DEALER—he's listed under "TOOLS" in the Yellow Pages—or write: Rockwell Manufacturing Company, Delta Power Tool Division, 626F N. Lexington Ave., Pittsburgh 8, Pa.

DELTA INDUSTRIAL TOOLS
another fine product by
ROCKWELL

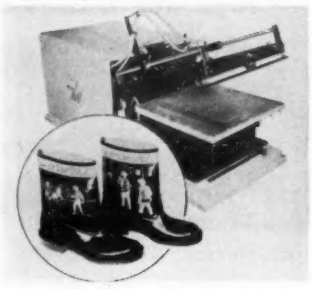
▲ For more details circle **NED-229 F9** on enclosed inquiry slip ▲

PRODUCTION SOLDERING UNIT provides 500 to 750° F temperatures

Selectable temperatures from 500 to 750° F are provided by heavy-duty Model 3374 production 100-w soldering unit. It automatically supplies high or low wattage as required to hold tip temperature constant. Pretinned iron-clad soldering tip weighs less than 4½ oz, measures 1⅞ in. long, and has a ⅛ x 1/32-in. chisel tip. Other shapes are obtainable. Made by **Eder Engineering Co.**, 1568 S. First St., Milwaukee 4, Wis.

▲ For more details circle **NED-230 F9** on enclosed inquiry slip ▲

SCREEN PROCESS PRINTER makes multicolor decorative imprints



Accurate registration of all colors in large size, multicolor decorative and identifying imprints is possible with the Model 112S screen process printer. It produces the opaque, heavy ink covers often required on leather, rubber, canvas, metal, and plastic objects to provide maximum clarity. Printer will mark objects up to 23 in. square with a maximum imprint size of 12 x 12 in. The stand-mounted unit is electrically controlled and air operated on 60 psi. Up to 20 objects per minute can be printed. Screens and screening inks are available for any need. Made by **Markem Machine Co.**, Keene 80, N. H.

▲ For more details circle **NED-231 F9** on enclosed inquiry slip ▲

TOTE & PARTS PANS offered in various sizes

Economical means of handling, segregating, and storing of such items as abrasive wheels, brushes, drills, fasteners, small parts, and assemblies is provided by this line of one-piece tote pans and small parts pans. Leakproof construction makes them suitable for washing and cleaning. Tote pans measure 18 x 12 x 6¼ in., weigh 8¾ lb, and are drawn of cold rolled 16-gage steel. They have ½-in. drag hook holes and a 1-in. curled rim. Small parts pans are drawn from 20-gage cold rolled steel in three sizes: 3⅛ x 5⅝ x 2⅛ in.; 4¼ x 9½ x 2⅞ in.; and 5¾ x 11¼ x 2⅜ in. They have embossed bottoms. Made by **Republic Steel Corp.**, Berger Div., 1038 Belden Ave. N.E., Canton 5, Ohio.

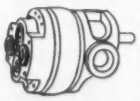
▲ For more details circle **NED-232 F9** on enclosed inquiry slip ▲

When ordinary pumps fail... switch to quality pumps from Brown & Sharpe

Brown & Sharpe makes and stocks more pumps, for handling more fluids, than any other pump manufacturer. It has 70 years of pump experience. B&S pumps are built with closer tolerances and finer finishes for longer life, even at high speeds. Available to you quickly through your Brown & Sharpe industrial distributor. Brown & Sharpe Mfg. Co., Providence 1, R. I.

Motor Driven Centrifugal

Automatic Reversing Vane



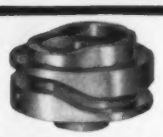
Rotary Geared

Brown & Sharpe
HYDRAULICS DIVISION
GEAR, VANE AND CENTRIFUGAL PUMPS
DOUBLE A VALVES
GEROTOR PUMPS
POWER UNITS
PROGRESS IN PRECISION FOR OVER 125 YEARS

Precision Tools and Gages • Milling, Grinding and Screw Machines
Cutters • Machine Tool Accessories • Pumps and Hydraulic Valves

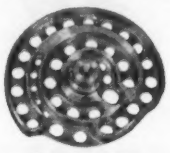
▲ For more details circle **NED-233 F9** on enclosed inquiry slip ▲

PRECISION CAMS and CAMSHAFTS
All Types . . . Experimental and Production



Special Drum Type Cam

TWO AND THREE DIMENSIONAL CAMS
for Ballistic, Computer and Instrument Use—Milled or ground to ± .0001" tolerance



Face Type Cam

FACE AND CYLINDRICAL CAMS
milled or ground to ± .0002" tolerance

CAMSHAFTS
Aircraft, Automotive, Diesel Marine, Fuel Injection

Camshaft for Internal Combustion Engine

EONIC *Inc.* Engineers of Precision

Write for catalog and additional information

459 E. Hollywood • Detroit 3, Michigan

▲ For more details circle **NED-234 F9** on enclosed inquiry slip ▲

NEW BALANCED CUTTING ACTION
Severance ECARNO-MILLS
THE ECONOMY MILL NEW DESIGN NEW CARBIDE

Make your money count! Replace more H.S. Rotaries and Mounted Grinding Points.

SOLID CARBIDE CUTTING HEADS

22 Shapes and Sizes Available

A NEW LOW PRICED HIGH CLASS PERFORMER

Made by the originator of ground-from-the-solid Rotary Files, and pioneer in this type of Carbide Mill, who presently offer the largest range of standard types, shapes, and sizes.

YOUR SPECIAL DEBURRING PROBLEMS ARE SOLICITED

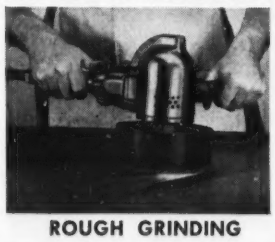
OPERATE EFFICIENTLY AT USUAL CARBIDE SPEEDS, YET PERFORM BEAUTIFULLY AT THE SLOWER SPEEDS OF STEEL CUTTERS

PHONE, WIRE, OR WRITE US NOW FOR PRICES

Severance TOOL INDUSTRIES INC.
761 Iowa Ave., Saginaw, Michigan
Ask for a Severance catalog today!

▲ For more details circle **NED-235 F9** on enclosed inquiry slip ▲

Airetool Grinders Speed Production



ROUGH GRINDING

FINE FINISHING

When you want to take down rough spots, or speed up a tough grinding job on flat or curved surfaces, use Airetool Model 700-V pneumatic grinder, left above. It's easy to handle with 6" cup wheel or brush, available in 4500 or 6000 rpm models.

Model 500-V pneumatic sander (above, at right) is perfectly balanced for feather-edge accuracy in fine metal finishing. Takes 7" sanding disc. 3 models with 2300, 3000 and 4000 rpm speeds.

For full information about Airetool pneumatic production tools, write for Bulletin 67. Airetool Manufacturing Company, Springfield, Ohio.

BRANCH OFFICES: New York, Chicago, Tulsa, Philadelphia, Houston, Baton Rouge
REPRESENTATIVES in principal cities of U.S.A., Canada, Mexico, South America, England, Europe, Puerto Rico, Italy, Japan, Hawaii.
EUROPEAN PLANT: Vlaardingen, The Netherlands
CANADIAN PLANT: Brantford, Ontario

AIRETOOL MANUFACTURING COMPANY
SPRINGFIELD, OHIO

▲ For more details circle **NED-236 F9** on enclosed inquiry slip ▲

FOR QUICK FOOLPROOF FLUID LINE CONNECTIONS

Here's the coupling for the job

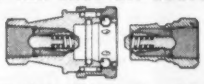
To connect a Hansen Two-Way Shut-Off Coupling, you merely pull back the sleeve on the Socket and push in the Plug. To disconnect, just pull back the sleeve. Available in brass or steel with female pipe thread connections from 1/8" to 1" inclusive.

Write for the Hansen Catalog

Here is an always ready reference when you want information on couplings in a hurry. Lists complete range of sizes and types of Hansen One-Way Shut-Off, Two-Way Shut-Off, and Straight-Through Couplings.

HANSEN SERIES HK®

TWO-WAY SHUT-OFF COUPLING



Instantly shuts off both sides of line . . . prevents loss of liquid, gas or pressure.

Representatives in Principal Cities

THE HANSEN MANUFACTURING COMPANY
4031 WEST 150th STREET • CLEVELAND 35, OHIO

For more details circle NED-237 F9 on enclosed inquiry slip

use Levolier® switches for GUARANTEED performance

No. 41 Unconditionally guaranteed 6 amp. "T" 125 V - 3 amp. 250 V

No. 71 Only 15/32" thick 6 amp. "T" 125 V - 3 amp. 250 V

The high standards of design, workmanship and materials that make it possible to guarantee the No. 41 LEVOLIER® unconditionally against failure in lighting circuits are applied to all LEVOLIER switches. Cut switch failure and replacement costs. Use 6 to 20 amp LEVOLIER switches for canopy, fixture and FHP motor use. Also toggle push button and momentary contact types.

Available from your electrical wholesaler

Send for McGILL Catalog No. 84.

engineered electrical products
McGILL
precision needle roller bearings

McGILL MFG. CO. INC., Electrical Div., 151 N. Campbell St., Valparaiso, Ind.

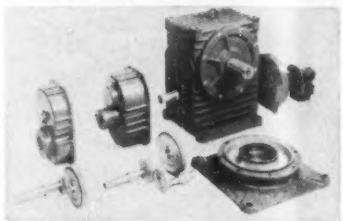
For more details circle NED-238 F9 on enclosed inquiry slip

SOLDER-JOINT VALVE
2½ and 3-in. sizes

No. 4 line of solder joint valves has been extended to include the 125-psi bronze gate valve in 2½ and 3-in. sizes. It was previously produced in seven sizes up to 2 in. with 125 and 200-psi ratings in steam, water, oil, and gas service. Valves are for service on K, L, and M copper tubing. Made by **Walworth Co.**, 750 Third Ave., New York 17, N. Y.

For more details circle NED-240 F9 on enclosed inquiry slip

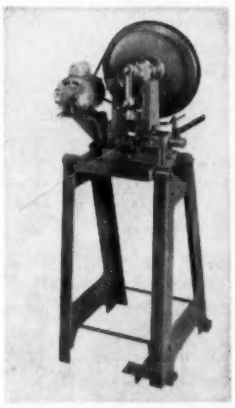
WORM GEAR REDUCERS
in 5 1/6:1 to 1212:1 ratios



Helical attachments for double and triple reduction units combine the advantages of helical gearing with the high ratio advantage of worm gearing in line of heavy - duty worm gear speed reducers. Units are stocked in all ratios from 5 1/6:1 to 1212:1 with center distances from 3 to 21 in. and any horizontal or vertical drive arrangement. All units can be supplied with a torque control attachment to protect driving and driven equipment from overload damage. Photo shows standardized mounting bases, worm gearing, single and double helical attachments, fans, and torque control attachments. Made by **Philadelphia Gear Corp.**, Erie Avenue & G Street, Philadelphia 34, Pa.

For more details circle NED-241 F9 on enclosed inquiry slip

HIGH SPEED TUBE CUTTER
produces up to 235 pieces per min



High-speed Model 500 tube-cutting machine, working on pieces as short as 1½ in., can produce up to 235 pieces per minute. Length is held to ±0.005 in. with parallel faces. Machine cuts tubing from 1/8 in. diameter with 0.028-in. wall thickness to ½ in. diameter with 0.060-in. maximum wall thickness. Machine bed can be tilted backward to let parts fall directly into tote pan. Accessibility of holding blocks and knives facilitates quick machine changeover for various tube diameters. Cut pieces can be flared without burring. Made by **Novi Tool & Machine Co.**, 25806 Novi Rd., Novi, Mich.

For more details circle NED-242 F9 on enclosed inquiry slip

YOUR BEST MOVE IS TO MOVE WITH MERRILL MATERIAL HANDLING DEVICES

For Interesting Information write

MERRILL BROTHERS
56-13 Arnold Ave., Maspeth, N. Y.
3-R-5

For more details circle NED-243 F9 on enclosed inquiry slip

Macwhyte Corrosion-Resisting wire ropes will give you increased service and safety in corrosive operating conditions.

Typical uses: Following is a partial list of industries using Macwhyte Corrosion-Resisting wire ropes:

Aircraft	Photographic
Beverages	Plating
Boating	Pulp and Paper
Cement	Rubber
Chemical	Rug Cleaning
Dye	Salt
Explosives	Sewage Disposal
Fertilizer	Soap
Fire Fighting	Sugar
Fishing	Tanning
Food Processing	Textile
Paint and Varnish	Water Purification
Petroleum Refining	Yachting

These industries use Macwhyte Corrosion-Resisting wire rope for many and varied purposes. Among the many uses are: cranes and hoists, slings, flag halyards, conveyors, grading racks, hand rails, standing and running rigging, swing pipe and float line uses, gate and screen hoists, ventilator, instrument, and regulator controls, etc.

Available from stock in reels, cut lengths, factory-made cable assemblies, or slings.

Advise us of the details of *your* corrosion problem affecting wire rope and we will make recommendations. Literature sent on request.

MACWHYTE WIRE ROPE
2906 Fourteenth Avenue, Kenosha, Wisconsin

MILL DEPOTS: New York 4, 35 Water St. • Pittsburgh 36, P. O. Box 10916, 353 Curry Hollow Road • Detroit 3, 75 Oakman Blvd. Chicago 6, 228 S. Desplaines St. • St. Paul 14, 2356 Hampden Ave. New Orleans 2, 144 Thalia St. • Ft. Worth 1, P. O. Box 605 • Portland 9, 1603 N. W. 14th Ave. • Seattle 4, 87 Holgate St. • San Francisco 7, 188 King St. • Los Angeles 33, 185 S. Myers St. 137

For more details circle NED-244 F9 on enclosed inquiry slip

NEW BENDIX MS-R ENVIRONMENT RESISTING ELECTRICAL CONNECTOR

Now available and approved in complete conformance with MIL-C-5015D.

This new connector answers the demand from the aircraft industry for a shorter, lighter and more reliable environment resisting connector. This connector will inactivate practically all other MS types and the Military has assigned a new class letter R to insure incorporation of this better connector in all new designs.

An important reliability feature of the new MS-R connector is an "O" ring at the main coupling joint which provides for the best possible sealing and more positive inter-facial compression and assures complete performance compatibility among all approved MS-R connectors. Establishment of the MS-R connector as the "universal" military connector is testimony to the record of previous MS environmental resistant connectors using resilient inserts as pioneered by this Division. In the Bendix* connector, wire sealing is accomplished by an exclusive slippery rubber grommet which permits convenient wire threading and grommet travel over wire bundles.

Write for more complete information on this latest addition to the ever-growing family of Bendix electrical connectors.

*TRADEMARK

Bendix SCINTILLA DIVISION
SIDNEY, NEW YORK

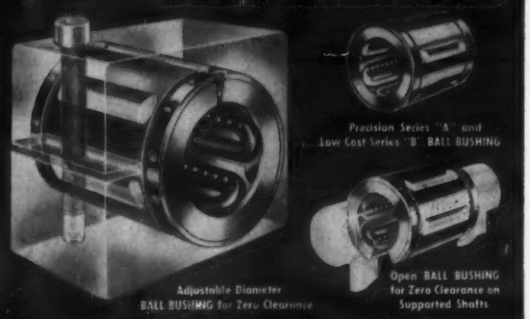
Bendix AVIATION CORPORATION

Export Sales and Service: Bendix International Division, 205 E. 42nd St., New York 17, N. Y. Canadian Affiliate: Aviation Electric Ltd., 200 Laurentien Blvd., Montreal 9, Quebec.

FACTORY BRANCH OFFICES: Burbank, Calif.; Orlando, Florida; Chicago, Ill.; Teaneck, New Jersey; Dallas, Texas; Seattle, Washington; Washington, D. C.

For more details circle NED-239 F9 on enclosed inquiry slip

NOW! Adjustable Diameter and Open
THOMSON BALL BUSHINGS



The BALL Bearing for all your LINEAR MOTIONS

LOW FRICTION • ZERO SHAKE OR PLAY
ELIMINATE BINDING AND CHATTER
SOLVE SLIDING LUBRICATION PROBLEMS
LONG LIFE • LASTING ALIGNMENT

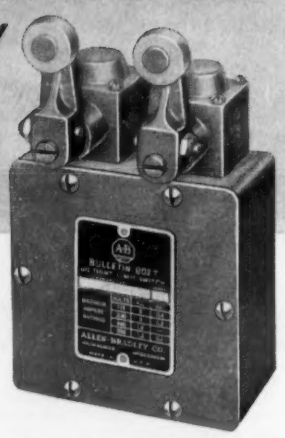
The various types cover a shaft diameter range of ⅛" to 4". Small sizes available in Stainless Steel. Write for literature and name of our representative in your city.

THOMSON INDUSTRIES, Inc.
Dept. G, MANHASSET, NEW YORK

Also manufacturers of NYLINED Bearings
... Sleeve Bearings of DuPont NYLON

For more details circle NED-245 F9 on enclosed inquiry slip

New Limit Switches
A-B QUALITY
Completely sealed against oil and coolants



Duplex type with two top roller lever heads.

Here are several "new ideas" in the Allen-Bradley Bulletin 802T line of limit switches. The operating heads of the limit switch shown above can be individually turned in 90° angles—to serve almost any operating condition. Several different heads are available—a limit switch with "mixed" heads is possible for unusual applications.

In all Allen-Bradley oiltight limit switches, oil and coolants cannot carry dirt and metal particles into the contact mechanism. The silver alloy contacts remain in perfect operating condition. These limit switches are good for millions of trouble free operations. Get complete information—today!

Roller lever type with micrometer adjustment.

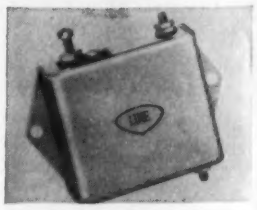
Wobble stick type equipped with wire extension.

Allen-Bradley Co., 1334 S. Second St., Milwaukee 4, Wis.
In Canada: Allen-Bradley Canada Ltd., Galt, Ont.

ALLEN-BRADLEY
Quality MOTOR CONTROL

For more details circle NED-246 F9 on enclosed inquiry slip

WARNING BUZZER
sound volume is adjustable



Suited for original equipment use as well as other purposes, BD Series buzzers are made in three sizes and for 6, 12, and 24-v dc service. They can also be used on alternating current. Each size has a different tone and an adjustable sound volume. They have dustproof chrome covers, phosphor bronze springs, and silver contacts. Made by **Line Electric Co.**, 271 S. Sixth St., Newark 3, N. J.

For more details circle NED-247 F9 on enclosed inquiry slip

STRAPPING KIT
reinforces, seals, bundles cartons

Lightweight, single-stroke steel strapping unit, 2500 ft of 18½-gage copper-coated steel strapping in an easel fiber carton, and an auxiliary cutter make up this strapping kit. It is usable for reinforcing, sealing, or bundling small shipping cartons. Compact unit tensions and ties the round strapping with a single lever stroke in a few seconds. Made by **Inland Wire Products Co.**, 3947 S. Lowe Ave., Chicago 9, Ill.

For more details circle NED-248 F9 on enclosed inquiry slip

DOLLY TRUCKS
convert into five different units

Handy Dolly truck, offered in 250 and 500-lb capacity models, can be used as a two-wheel hand truck; four-wheel dolly; hand truck with or without tray and/or shelf; bin dolly or low platform cart; and appliance dolly as shown. It rolls on ball bearing wheels with weight proportioned between front and rear wheels for easy maneuverability. Truck folds into a compact unit small enough to be stored in a closet. Available from **Bellows Sales Co.**, 1607 Wichita St., Dallas 4, Tex.

For more details circle NED-249 F9 on enclosed inquiry slip

NEW!

Crane Formula 425-A Thread Compound prevents seizing and galling

It's the best lubricating compound you can get for high loading, high temperature installations up to 1050° F.—screwed or flanged. Prevents seizing and galling damage to pipe threads, bolts and gaskets . . . gives tight metal-to-metal contact. Joints open readily—and you can re-use materials—even after long exposure to high heat. Conforms to Military Spec. MIL-A-907. Stocked in 1- and 4-pound cans by your local Crane Branch or Crane Wholesaler.

CRANE®
World's Leading Supplier of Piping Materials
Crane Co., General Offices: 836 S. Michigan Ave., Chicago 5, Ill.

For more details circle NED-250 F9 on enclosed inquiry slip

SAFETY GRIP-STRUT
Patented

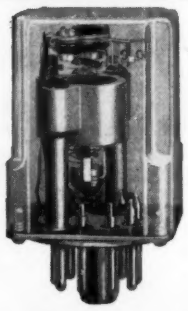
STAIR TREADS
for greater safety • for greater economy

Use Safety GRIP-STRUT stair treads throughout your plant, on your manufactured products for greater anti-skid protection. All one piece of material with open area in excess of 55% total area, easy to flush clean, greater strength with less weight, in steel or aluminum.

Available at Globe Distributors in all principal cities. Consult yellow pages in your phone book under "stair treads."

PRODUCTS DIVISION
THE GLOBE COMPANY
4002 S. PRINCETON AVE. • CHICAGO 9, ILL.

For more details circle NED-251 F9 on enclosed inquiry slip



DECISION MAKER
for simplified control, high-precision switching

Normal/abnormal . . . high/low . . . go/no-go: these are important decisions being made by A.P.I. Very High Sensitivity Measuring Relays in all types of applications.

Operating directly from sensing elements or circuits, the A.P.I. measuring relay will provide close-tolerance control on a signal change as small as ±1 microamp; or, in a 400- to 500-volt circuit, on a variation of only a few percent. When used simply as a high-precision switch for tiny currents, it can be made to actuate dependably on a total input of only 0.2 microampere or 0.1 DC millivolt.

Under test, the relay has demonstrated perfect reliability for more than 10,000,000 operations. This is not a record performance, just a reasonable expectation of service life.

For more information, request Bulletin 104-D.

ap/ ASSEMBLY PRODUCTS, INC.
Chesterland 61, Ohio
S.A. 1906

For more details circle NED-252 F9 on enclosed inquiry slip

Lightweight yet VIRTUALLY INDESTRUCTIBLE

Net Selling Price $5.50 ea.

NEW J&J HIGH DENSITY, POLYETHYLENE

TOTE BOX
BY GREX

. . . the lightweight, inexpensive replacement for cost-heavy metal tote boxes . . . hold big loads without bending or twisting . . . easy to lift with wide, roll-over edges . . . cross stack securely or nest conveniently when not in use . . . will not shatter under heavy impact . . . resist steam cleaning or freezing temperatures . . . withstand oils, greases, acids, chemicals, strong detergents. Size: 21" x 15½", inside depth, 5½". Color: Coffee brown.

Nationally Distributed Through Quality Dealers

Sales Representatives In Leading Cities Throughout The Country

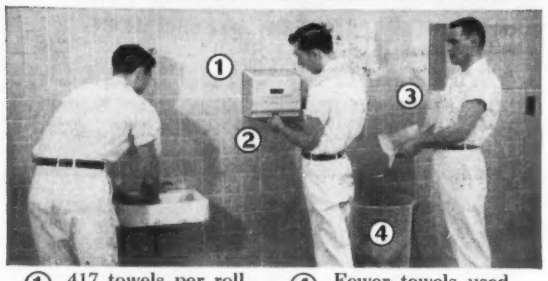
Jarvis AND Jarvis, Inc.
PALMER, MASSACHUSETTS

In Canada: Jarvis & Jarvis of Canada, 1744 William St., Montreal, Que.

For more details circle NED-253 F9 on enclosed inquiry slip

What does your towel service cost?

You can raise the standard of service ...yet reduce the cost by using Mosinee Turn-Towls!



① 417 towels per roll mean less cabinet filling

② Push button control means 40% to 50% less towels used

③ Pure sulphate towel means fast drying — extra strength

④ Fewer towels used mean less washroom maintenance

Write for name of nearest distributor

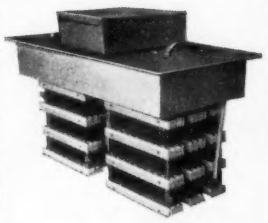
MOSINEE Sulphate Towels
BAY WEST PAPER CO.
1084 W. Mason St
GREEN BAY • WIS.

For more details circle NED-254 F9 on enclosed inquiry slip

HEATING UNITS

Better Controlled Heat at Lower Cost for Forced Air Installations

FFHP TYPE HEATING UNIT PLUG FEATURES



- TRENT "Folded-and-Formed" Heating Elements—greater radiating surface per square inch of cross section than any other electrical heating element!
- Maximum Frame Temperatures to 1350°F.!
- Velocities up to 4000 Ft./Min.!
- Watt Densities from 10 to 30 Watts per Sq. Inch!
- 120, 240, 480 or 600V—3 Phase or Single Phase!
- Wired, Mounted, Insulated complete with Terminal Box—Ready for Installation!

WRITE FOR BULLETIN 102T

TRENT INC.
Electrically Heated Industrial Equipment
251 LEVERINGTON AVE., PHILADELPHIA 27, PA.
In Canada Supreme Power Supplies Limited, Toronto 14

For more details circle NED-255 F9 on enclosed inquiry slip

Production..... more than Doubled

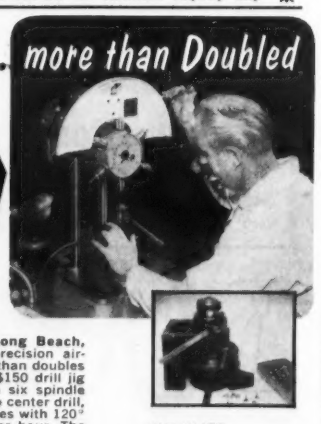
with

BURGMASTER

(Bench Model)

6 Spindle Turret Drill

- $150 special drill jig eliminated
- Saves 2.5 miles jig moving per lot
- Reduces floor space 66%



Har-Bar Engineering Co., Long Beach, California manufacturer of precision aircraft and missile parts, more than doubles production and eliminates a $150 drill jig on a small missile part. The six spindle Burgmaster is double tooled to center drill, drill and c'sink 3 precision holes with 120° locations at the rate of 60 per hour. The parts are held in a hand indexed, standard Hardinge Collet indexing fixture. All three operations are performed at one setting, before indexing.

The six spindle turret is power indexed to carry out a series of operations, in a minimum of time. Pre-selective, automatically shifted spindle speeds for each spindle and sensitive hand feeding insure fine finish, accuracy and longest tool life. Each spindle also has pre-set depth control. The former method required 2 operations and 2 set-ups and the operator moved the jig 2.5 miles on single spindle drills while machining 550 parts. Now the operator remains seated.

JOB FACTS
Company: Har-Bar Engineering Co. Long Beach, California
Part: Special Stud—N1 Silver & Gold Plated, ½" x .450 dia.
Material: Aluminum Alloy
Lot: 550, Tolerance: +.003, —.001
Chucking: Standard Hardinge Collet—Hand Indexing Fixture
Production: 60 Parts Per Hour
Advantages: Doubles Production • Eliminates a $150 Drill Jig • Saves Walking 2.5 Miles • Reduces Floor Space 66%
Machine Cost: $550 plus extras

YOUR NEAREST DEALER will be glad to give a free demonstration of the Burgmaster to prove how you can cut your drilling costs. Ask for free literature.

MODEL "O" 1/4" CAP. IN STEEL

BURGMASTER CORPORATION
SMALL TOOL DIVISION — BURG TOOL MANUFACTURING CO., INC.
15001 South Figueroa Street, Box 311, Gardena, California
Phone: FAcuity 1-3510 — Phone, wire or write Dept. OA

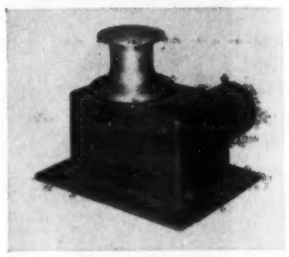
For more details circle NED-256 F9 on enclosed inquiry slip

CHECK VALVE
withstands up to 2000 psi

Spring loaded, positive shut-off, check valve checks flow only when pressure is changed. It withstands hydrostatic pressure up to 2000 psi and can be used for air, water, steam, gas, or oil flow, or where any corrosive liquid is encountered, at high or low temperatures. Valve is 3½ in. long and has 1¼-in. diameter. Its four parts are an R Monel body and cover enclosing the Monel valve stem and Inconel spring. Installed in vertical or horizontal position, it has ⅜-in. IPS threads at male and female ends. Made by **Robert H. Wager Co.**, Dept. 22, 423 Valley St., South Orange, N. J.

For more details circle NED-257 F9 on enclosed inquiry slip

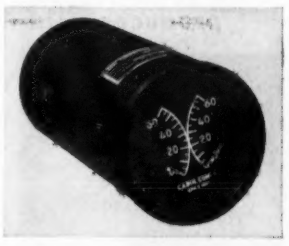
VERTICAL ELECTRIC CAPSTAN
has 500-lb line pull



Model AA vertical electric capstan, a modification of a type used for commercial boats, is intended for industrial and motor truck installation. It has 500-lb line pull and can handle up to 1-in. manila rope. For truck or tractor installation, unit is available with 6 or 12-v motor and controls. For industrial use, it is equipped to operate on 110-v single-phase, or 220-v three-phase current. Made by **Ideal Windlass Co.**, 5810 Post Rd., East Greenwich, R. I.

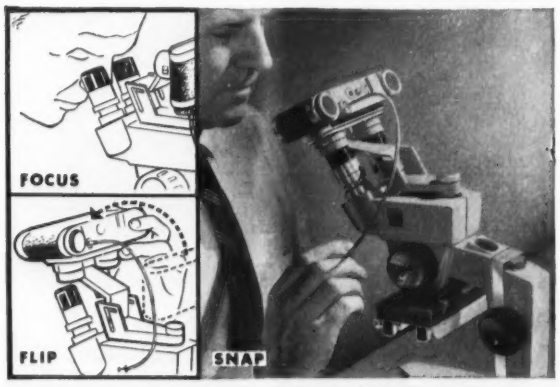
For more details circle NED-258 F9 on enclosed inquiry slip

DUAL TACHOMETER
electronic unit has two indicators



Two complete indicators with overspeed sensing and protective circuits are housed in a single compact package in the Model 6602A dual electronic tachometer. This unit measures the speed of a rotating shaft, gear, or rotor from 0 to 60,000 rpm with full scale accuracy of ±3 per cent. A magnetic pick-up develops an alternating current voltage with frequency proportional to the rate of rotation of the object being measured. Second circuit is fed to an overspeed detection network which operates a warning device at a preset value. Tachometer operates from a 28-v source and withstands a range of −55 to 50° C. It is 3.23 in. in diameter, 6½ in. long, and weighs less than 2 lb. Made by **Varo Mfg. Co.**, 2201 Walnut St., Garland, Tex.

For more details circle NED-259 F9 on enclosed inquiry slip



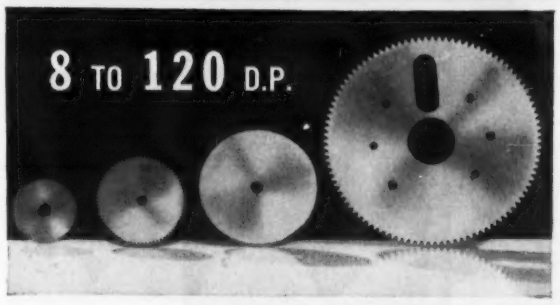
AO OFFERS EASY, LOW-COST STEREO PHOTOMICROGRAPHY

This new Stereocamera-Viewer outfit provides everything needed to photograph a magnified specimen image in life-like three-dimension. Included are a 35mm Graflex Stereocamera, an adapter-mounting unit with special compensating prisms and a full-size Graflex Stereoviewer. Designed exclusively for use with the AO Spencer Cycloptic Stereoscopic Microscope, the camera and adapter mount quickly and easily.

FOCUS the specimen sharply, **FLIP** the mounted 35mm Stereocamera into position over eyepieces and **SNAP** the magnified 3-D image. That's all there is to it. Camera swings back, out of the way, until you are ready for the next photo. With the Stereoviewer you can review your findings anytime . . . anywhere. This easy-to-use 3-D photomicrographic package available only from American Optical.

American Optical Company
SPENCER Instrument Division • Buffalo 15, New York

For more details circle NED-260 F9 on enclosed inquiry slip



LONG LIST OF STOCK GEAR DIES OFFERS YOU BIG SAVINGS!

ACCURATE STAMPED GEARS by *WINZELER* are BIG savers of time and money. Single stampings are laminated to wide faces at savings up to 60%! Further economies are made possible by a BIG range of *stock* Dies. Modern new plant, methods, and equipment now greatly increase production speed, efficiency and *economy!* Send blue prints. Tell us about your needs today. No obligation.

SEND FOR...

New list of WINZELER-made stock Gear Dies. Ask for it on company letterhead, *please!*

WINZELER Stamped Gears

WINZELER MANUFACTURING & TOOL CO.
7355 W. WILSON AVENUE • CHICAGO 31, ILLINOIS

For more details circle NED-261 F9 on enclosed inquiry slip

HERE'S

NEOTHANE

***solid* answer to your most demanding haulage problems**

TAKE A GOOD LOOK—for this Goodyear "solid" is an entirely new kind of tire. Called *Neothane*, it surpasses every known measure of industrial tire performance.

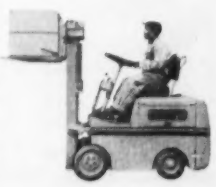
ITEM: it lasts as much as *four times* longer than conventional solid tires.

ITEM: it carries *two to four times* the load capacity of standard solids.

ITEM: it offers super resistance to broken glass, metal chips, sharp stones and other hazards which cause ordinary tires to fail.

ITEM: for all its toughness, it offers remarkable cushioning—"gives" with surface contours—won't mark even finely finished floors—saves plant maintenance and cargo damage.

These Xtra-Service, Xtra-Capacity advantages are yours only with *Neothane*—the new Goodyear polyurethane that wears like iron, but has the quiet resilience of rubber.



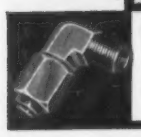
FOR MORE INFORMATION on this amazing new tire—*and how it can save for you*—write Goodyear, Industrial Tire Sales, Akron 16, Ohio.

INDUSTRIAL TIRES BY **GOODYEAR**

More tons are hauled on Goodyear Truck Tires than on any other kind

Neothane—T. M. The Goodyear Tire & Rubber Company, Akron, Ohio

For more details circle NED-262 F9 on enclosed inquiry slip



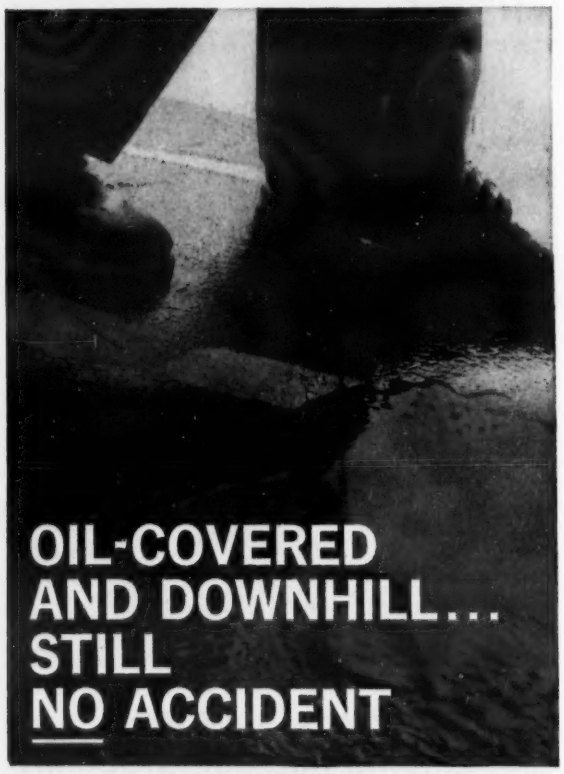
Pick the right tube fitting quicker with this 128-page Parker Data Book

All the data to design or "tube up" an industrial system is included in this 128-page Parker Tube Fittings Catalog. Guides you in proper tube selection. Gives installation hints, also descriptions and dimensions of all Parker Fittings: "Triple-lok," "Ferulok," "Intru-lok," "Weld-lok," "Braze-lok," in steel and stainless steel, copper, aluminum, brass, for any industrial system from instrument lines to high pressure hydraulic lines.

Ask your Parker distributor, listed in the Yellow Pages, for a Parker 4300 Catalog. Or write . . .

Parker FITTINGS AND HOSE DIVISION
17325 Euclid Avenue • Cleveland 12, Ohio
A DIVISION OF PARKER-HANNIFIN CORPORATION

▲ For more details circle **NED-263 F9** on enclosed inquiry slip ▲



Get Lasting Protection Against Slipping with Alcoa Abrasive Tread Plate

Disaster no longer lurks on the oil-splattered floor of this vital production area. Alcoa® Aluminum Abrasive Tread Plate makes sure it never gets a chance to strike—no matter how wet, oily or greasy the floor becomes. Made with tough particles of fused aluminum oxide, its hard, abrasive surface offers complete slip-proof protection. Lighter weight makes it easier to install. Corrosion resistance means virtually no maintenance. Longer, safer protection is assured, because wear serves only to renew the surface by uncovering embedded abrasive particles.

Protect skilled workers and avoid costly production breakdowns by installing Alcoa Abrasive Tread Plate in areas where slippery materials accumulate. For more information check the coupon below, write Aluminum Company of America, 1689-F Alcoa Building, Pittsburgh 19, Pa., or call your nearest Alcoa Distributor.

ALCOA ALUMINUM

Your Guide to the Best in Aluminum Value

For Exciting Drama Watch "Alcoa Theatre," Alternate Mondays, NBC-TV, and "Alcoa Presents," Every Tuesday, ABC-TV

Aluminum Company of America
1689-F Alcoa Building, Pittsburgh 19, Pa.

Show me how Alcoa Abrasive Tread Plate prevents slipping;
Please send a FREE sample—also application, design and fabricating data

Name and Title _____

Address _____

City and State _____

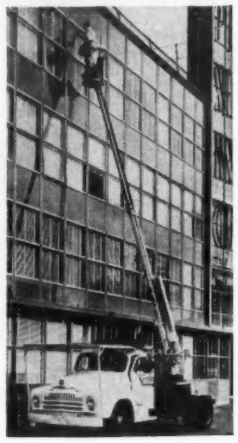
▲ For more details circle **NED-264 F9** on enclosed inquiry slip ▲

MASTER-KEY PADLOCK
has five-pin tumbler cylinder

An almost unlimited number of key changes for master keying purposes are provided by the No. 81 Super Security padlock. It has a five-pin tumbler extruded - brass cylinder, 1¾-in. laminated steel case, hardened steel shackle, heavy brass locking lever, and cadmium rustproofing. Master keyed, submaster keyed, keyed alike, and regular lock series are offered. Made by **Master Lock Co.**, 2600 N. 32nd St., Milwaukee 45, Wis.

▲ For more details circle **NED-265 F9** on enclosed inquiry slip ▲

TELESCOPING BOOM PLATFORM
truck-mounted, reaches 40 ft 9 in.



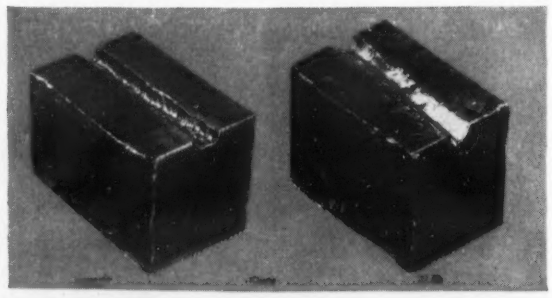
Designed to be mounted on 16,000-lb or heavier truck chassis, the improved Model V Industrial Monkey hydraulically-operated telescoping boom and aerial platform reaches 40 ft 9 in. All movements are actuated by double-action hydraulic cylinders, and platform is kept level by a double-action cylinder at its base. Platform has a dielectric deck mounted on insulators for operator safety. Unit can be maneuvered from straight out to straight up and has a 270-degree turning radius. Made by **Peters Co.**, IM Div., 1933 S. E. Union Ave., Portland 14, Oreg.

▲ For more details circle **NED-266 F9** on enclosed inquiry slip ▲

SOLDERING TOOL
produces void-free joints

Automatic and adaptable to soldering multiple prong plugs, this resistance soldering tool eliminates arcing and provides high speed, void-free connections. In a single-step operation, the tool produces even heating temperature throughout the work. Zirconium-tungsten electrode does not require frequent redressing, maintenance, or replacement, and its tip can be ground to any shape. Unit consists of a transformer, a hand tool with a pressure-operated switch, and a single electrode. Transformer is rated 400 va and has provision for two heats. Made by **General Electric Co.**, 1 River Rd., Schenectady 5, N. Y.

▲ For more details circle **NED-267 F9** on enclosed inquiry slip ▲



Which stainless steel block was grooved in 12 seconds?

(Right, above). It took 10 minutes to chip a ¼" deep, ⅜" wide groove in this 3¼" long stainless steel block. Arcair did a better job in just 12 seconds . . . or 1/50th of the time. (See block at left.) Groove is 5/16" deep; 7/16" wide. Both blocks were cut from the same stainless steel bar.

You can groove, cut, gouge or bevel **any** metal faster with Arcair . . . get significant cost savings. Yet, the Arcair process costs less than $100.

HOW DOES ARCAIR WORK? The torch uses 80 p.s.i. air, welding machine current and special electrodes to melt and instantly blow away metal. There's no oxidation. New operators learn everything in 15 minutes.

WHAT'S YOUR PROBLEM? Write us. Without obligation, we will recommend correct torch and method to help you cut costs. (Or, call your Arcair welding supply distributor.)

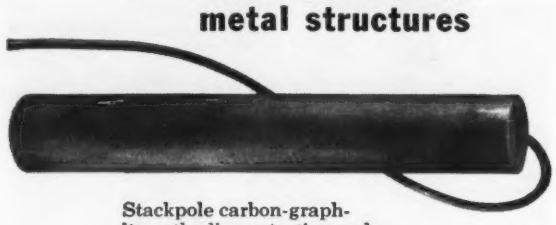
Arcair

THE ARCAIR CO., 449 S. Mt. Pleasant St., Lancaster, Ohio
Send me more information on Arcair Torches and special electrodes.

NAME _____ TITLE _____
COMPANY _____
ADDRESS _____
MY PROBLEM _____

▲ For more details circle **NED-268 F9** on enclosed inquiry slip ▲

CATHODIC PROTECTION AGAINST RUST
for buried or immersed metal structures



Stackpole carbon-graphite cathodic protection rods provide positive, low-cost rust prevention for pipe lines, ships, marine structures, structural footings and other buried or immersed metal objects. Special types available with new features for both earth and water applications. Write for Cathodic Protection Bulletin,
Stackpole Carbon Co., St. Marys, Pa.

STACKPOLE

"EVERYTHING IN CARBON BUT DIAMONDS"

▲ For more details circle **NED-269 F9** on enclosed inquiry slip ▲

dependable

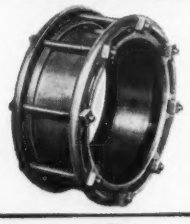
ANCHOR VERTICAL SPEED REDUCERS

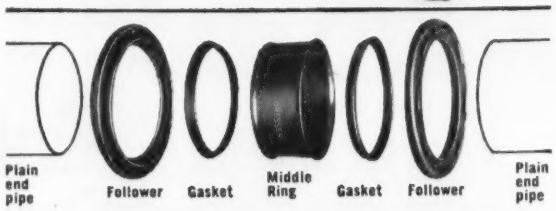
Designed specifically for conveyor applications requiring a vertical output shaft (up or down), and extended bearing housing for high overhung load, ANCHOR Reducers feature readily accessible helical gears for ratio changes. Available from stock in six sizes, ratios up to 1800:1. Write for Bulletin 57-1.

ANCHOR STEEL & CONVEYOR CO.
6906 KINGSLEY AVE. DEARBORN, MICHIGAN

▲ For more details circle **NED-270 F9** on enclosed inquiry slip ▲

Simple way to solve tough piping problems





Slip follower rings and gaskets on pipe ends. Place middle ring over pipe end and stab pipe ends together. Slide gaskets under middle ring flares and followers. Insert bolts and tighten!

Dresser® Couplings solve piping problems of cramped quarters, vibration and stresses, or pipe misalignment . . . PERMANENTLY and ECONOMICALLY! Style 38 Coupling, designed for ⅜" to 72" pipes, makes a non-rigid, tight joint that allows up to 6° pipe deflection. Fast to install, easily dismantled. Booklet No. 531 gives many examples of typical, Dresser-solved piping problems.

Bradford, Pennsylvania
Chicago
Houston
New York
S. San Francisco
Toronto & Calgary

DRESSER MANUFACTURING DIVISION

▲ For more details circle **NED-271 F9** on enclosed inquiry slip ▲

560,000 soap wrappers on this paperboard pallet

There are 560 bundles of 1,000 wrappers each in this unit load. They weigh 2,100 pounds. Base of the load is a Signode pallet with twelve posts 4¼" high to accommodate a special hand truck used in in-plant handling. Overall dimensions are 53" x 42" x 33" high. Five steel straps are centered between posts. For more details, ask for Release #2.

Signode expendable paperboard pallets are light, strong, clean, shock-absorbing. A 10-lb. pallet can support 6,000 lbs. And there's no physical problem or bookkeeping problem of return—an advantage to you and your customers.

Let a Signode Pallet Licensee—*a dependable local supplier*—help you design a corrugated unit load that will give you maximum savings. We will be glad to put you in touch with one or more licensees near you. Just write Signode.

Sponsored by Paperboard Pallet Manufacturers

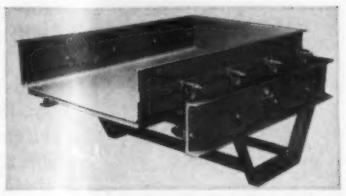
in cooperation with

SIGNODE STEEL STRAPPING CO.

Dept. SP, 2643 N. Western Ave., Chicago 47, Ill.

▲ For more details circle **NED-272 F9** on enclosed inquiry slip ▲

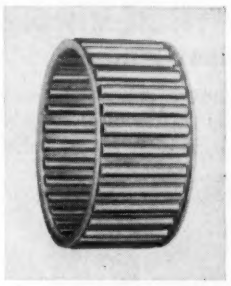
VIBRATING FEEDERS lengths are from 3 to 10 ft



Short distance movement of sand, chemical, or other bulk materials in the limited space between machines or operations is simplified by this vibrating feeder. Mechanical simplicity, enclosed drive, and use of rubber-bushed, spring-loaded supporting arms make possible installation in inaccessible locations. Feeders range in length from 3 to 10 ft and in widths from 6 to 36 in. Four drive positions are offered. Made by **Ajax Flexible Coupling Co.**, Westfield, N. Y.

▲ For more details circle **NED-275 F9** on enclosed inquiry slip ▲

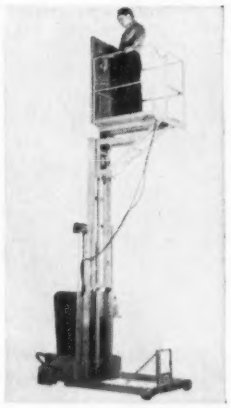
CAGE & ROLLER ASSEMBLY in ½ to 2-in. shaft diameter sizes



These roller - cage assemblies will meet space restrictions in idler gears, planetary gears, seaming rolls, or any location where shaft and housing surfaces can be hardened and ground. Assemblies are made in 18 sizes for ½ to 2-in. shaft diameters, in choice of two lengths for each shaft diameter. The ⅛-in. diameter ground rollers in the assemblies are permanently aligned in pockets or bronze cages centered on the housing surface. They cannot skew or misalign and can be selected for special clearance requirements. Made by **Orange Roller Bearing Co.**, 557 Main St., Orange, N. J.

▲ For more details circle **NED-276 F9** on enclosed inquiry slip ▲

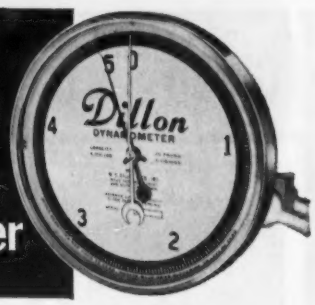
MAINTENANCE & STACKING UNIT self-propelled type has 12½ ft lift



Modification of the standard Walkie-Worklifter suits it for both overhead maintenance work and transporting-stacking operations. The self-propelled unit can be equipped with a 30 x 36-in. guard rail platform which slips over a standard pallet stacking fork. Thus equipped, it can elevate maintenance personnel up to a maximum of 12½ ft. Elevation and horizontal travel can be remotely controlled from the elevated platform, as well as from ground level. A single battery furnishes power for both motions. Capacity is 1000 lb. Made by **Economy Engineering Co.**, 4509 W. Lake St., Chicago 24, Ill.

▲ For more details circle **NED-277 F9** on enclosed inquiry slip ▲

Investigate The Portable Dillon Dynamometer



- 13 CAPACITIES: 0-500, 0-1000, 0-2500, 0-3500, 0-5000, 0-10M, 0-15M, 0-20M, 0-30M, 0-40M, 0-50M and 0-100M pounds.
- Choice of dial sizes: 5" or 10" diameter.
- Equipped with attachment shackles and pins.
- Dial protected by shatterproof crystal.
- Will withstand accidental overloads.
- Has max. pointer to register peak loads.
- Extremely compact. Requires little headroom.
- Lightweight yet rugged. Easy to handle.

YOURS FREE!

Profusely illustrated catalog showing applications and prices. Write **today!**

W. C. Dillon & COMPANY, INC.

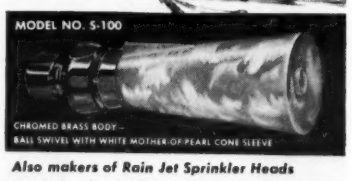
14578NE Keswick Street
Van Nuys 1, California

▲ For more details circle **NED-278 F9** on enclosed inquiry slip ▲

World's first and only shower head with a Rotary Oscillating Nozzle RAIN JET® ROTARY SHOWER HEAD

- *Yes, the nozzle rotates in an oscillating orbit.*
- *Swirling streams of activated water,*
- *Fits standard shower outlet, ½" pipe thread.*
- *Unconditionally guaranteed.*

Adjustable Pull-Push cone for complete control. Directional spray is confined to desired area. Full pattern. No hollow spots.



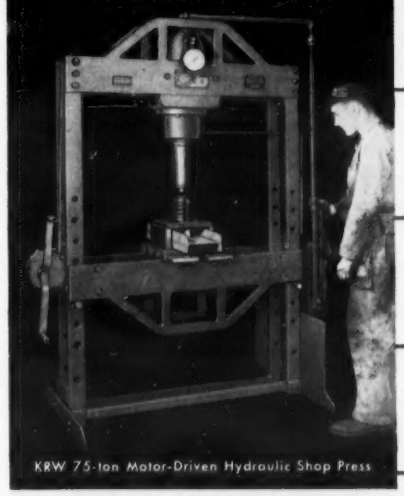
Also makers of Rain Jet Sprinkler Heads

Manufactured under Rain Jet Patents No. 2,589,942; 2,639,191; 2,823,952; and 2,854,283. Other Patents Pending.

RAIN JET Corporation 301 South Flower St., Burbank, Calif.

▲ For more details circle **NED-273 F9** on enclosed inquiry slip ▲

KRW MULTI-JOB PRESS DOES ALMOST EVERYTHING!



KRW 75-ton Motor-Driven Hydraulic Shop Press

JACK OF ALL JOBS: This KRW Motor-Driven Hydraulic Shop Press performs all sorts of work that calls for a "squeeze" (up to 75 tons) There's practically no limit to what it can do. The jobs shown above are but a few. Dies can be readily improvised for hundreds of applications.

QUICK CHANGEOVER. It usually takes only a minute or two to switch from one setup to another. As a result, many a KRW shop press that has been purchased for one job is now doing dozens.

SPEED, ACCURACY AND OPERATING EASE: Developed by a maker of numerous types of hydraulic presses, KRW features assure bonus performance: Bed and crown members truss-reinforced. Any pressure up to rated tonnage quickly attained. Convenient lever controls ram. Excellent inching. Spring return of ram. Direct-connected motor drive.

GET THE FULL STORY on this versatile machine as well as other KRW hydraulic shop presses (motor-driven and hand-operated, 25 thru 150 tons). Mail the coupon below.

K. R. WILSON, INC.
1228 MAIN STREET, ARCADE, N. Y.

MAIL illustrated bulletins on KRW Motor-Driven and Hand-Operated Shop Presses to us, without obligation.

NAME _____ TITLE _____
COMPANY _____
STREET _____
CITY _____ ZONE _____ STATE _____

▲ For more details circle **NED-279 F9** on enclosed inquiry slip ▲

More capacity... size for size!

Crosby-Laughlin Load-Rated* Shackles

Designed to new safety standards

- **Heat treated bows**
- **Heat treated alloy pins**
- **Guaranteed capacity**
- **50% stronger than ordinary shackles**
- **Safe working load forged in every shackle**

Stocked and sold by leading mill supply, construction and industrial equipment distributors.

Write for FREE specifications catalog listing the most complete line of drop forged fittings for wire rope and chain.

*Trademark

Look for the Crosby-Laughlin name—it means guaranteed capacity!*

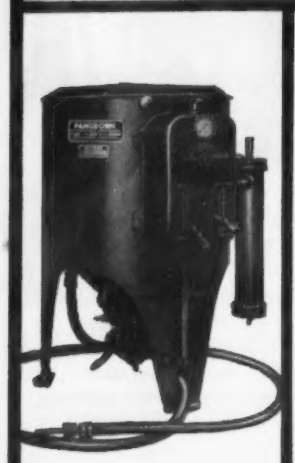
CROSBY-LAUGHLIN *Division*

AMERICAN HOIST & DERRICK COMPANY
FT. WAYNE, INDIANA

Manufacturers of Crosby Clips and "Load-Rated" Blocks . . . Crosby-Laughlin "Load-Rated" Fittings . . . Lebus Load Binders and Snatchblocks.

▲ For more details circle **NED-274 F9** on enclosed inquiry slip ▲

Clean Surfaces Quickly



Use Pangborn Air Blast Cleaning Machines for fast, economical maintenance of bridges, tanks, buildings, hulls, structural metal, sheets and plates.

Removes scale, rust, paint, dirt; leaves *toothed* surface ready for painting. Portable, stationary, dry and wet types.

Write PANGBORN CORP., 2400 Pangborn Blvd., Hagerstown, Md.

Manufacturers of Blast Cleaning and Dust Control Equipment and Rotoblast® Steel Shot and Grit.

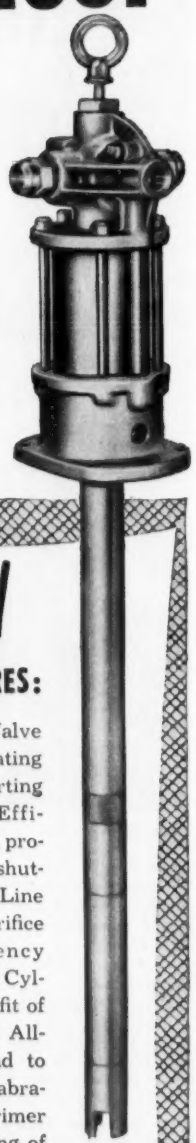
Pangborn
BLAST CLEANS CHEAPER

▲ For more details circle NED-280 F9 on enclosed inquiry slip ▲

All-New Alemite "77" Lubricant Pump

packs most power

FOR HIGHEST PERFORMANCE!



★ 5.2 horsepower . . . 68% more powerful than any other lubricant pump of its class!
★ Lightweight, rustproof aluminum construction!
★ Delivers 19.7 lbs. of light-bodied lubricant per minute!
★ 3 models for all heavy-duty applications . . . all lubricants!

ALL-NEW

ALEMITE "77" FEATURES:

• Volume Air Distributing Valve has full floating slide, self-seating – self-cleaning – volume porting • Modern-Design, Highly Efficient Toggle Trip Mechanism provides balanced pressure on shuttle . . . won't bind • Straight-Line Exhaust has extra large orifice for highest pump efficiency • Hardened Steel Piston and Cylinder, lapped to a precision fit of 125 millionths of an inch • All-Steel Primer Valve, ground to perfect seal . . . hardened for abrasion resistance • Dynamic Primer assures priming and pumping of heaviest lubricants.

Write for free catalog today!

Symbol of SW Excellence — ALEMITE DIVISION STEWART-WARNER CORPORATION

Dept. AI-69, 1850 Diversey Parkway, Chicago 14, Illinois

▲ For more details circle NED-281 F9 on enclosed inquiry slip ▲

WELD TIMER
synchronous unit is adjustable

Welding time cycle is quickly adjustable from ½ to 10 cycles (about 8 to 160 milliseconds) with the Tweezer-Weld Model T-3 Trans-Sync weld timer. A 100 per cent phase shift heat control is included. The transistorized synchronous timer makes welding electronic pressure less critical and facilitates joining of partly oxidized materials. Unit is suited for accurate welding control on high speed automatic machinery. Operating on 110 or 220 v ac, it has a maximum output of 1 kva. Made by **Federal Tool Engineering Co.**, 1386 Pompton Ave., Cedar Grove, N. J.

▲ For more details circle NED-282 F9 on enclosed inquiry slip ▲

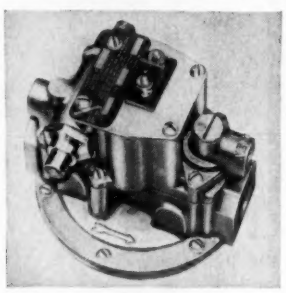
ROPE TIE
helps palletize container loads

Quick-tying rope Ty-Up which has a compact metal fastener at the end helps to palletize container loads for warehouse handling. Rope is looped around the

top tier of containers, and is tightened and tied with one wrist motion when free end is pulled snugly between open bars of the fastener. One pull releases the tension, and the Ty-Up is ready for re-use. Offered by **Tie Co.**, Dept. R-1, 14 Depot St., Unadilla, N. Y.

▲ For more details circle NED-283 F9 on enclosed inquiry slip ▲

GAS HEATING CONTROLS
valves, pilots, regulators included



Line of controls for gas heating includes Series 9100 and 9200 diaphragm gas valves in ½ through 3-in. sizes with manual opening and electric reset features. Series 9000 combination diaphragm gas valves, automatic pilots, and regulators in ½ in. small, ½ in. large, and ¾ in. sizes can have manual opening, electric reset, and 100 per cent shut-off. Also available are manual opening kits, special slow-opening valves, units without pressure regulators, and a kit for changing LP-gas models to city gas needs. Made by **Penn Controls, Inc.**, Goshen, Ind.

▲ For more details circle NED-284 F9 on enclosed inquiry slip ▲

Handle all these operations with AIR VACUUM SUCTION PRESSURE

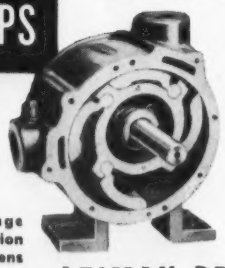
• Lifting • Holding • Sorting • Separating • Mixing • Feeding • Filling • Instrument Testing • Vacuum Forming • Agitating • Chucking

—and for the most efficient, low-cost air source, *use*

LEIMAN Rotary Positive AIR PUMPS

Vacuum — suction — or pressure supplied by Leiman Air Pumps is the most simple, reliable, low-cost method of handling countless operations. Exclusive hinged vane design provides greater capacity with smaller pumps, slower speeds. Durable, precision cast iron and steel parts take up their own wear, to assure "lifetime" dependability.

Many models:
VACUUM to 29.9" Hg.
PRESSURE to 20 psig.
VOLUME to 162 c.f.m.



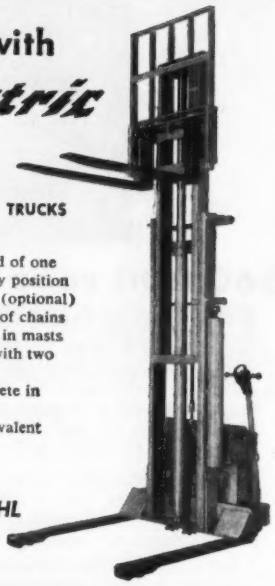
• Even, pulseless flow
• No tanks needed
• Vacuum or pressure from same pump
• Quiet running
• Little or no maintenance
• Every pump tested before shipment

WRITE FOR 16-page catalog and Application Book showing dozens of "how-to-do-it" blueprints.

LEIMAN BROS., Inc.
167 Christie St., Newark 5, N. J.
Established 1887

▲ For more details circle NED-285 F9 on enclosed inquiry slip ▲

modernize with **HydroLectric**



A GREAT NAME IN LIFT TRUCKS

• Two driving wheels instead of one
• Braking with handle in any position
• Automatic parking brake (optional)
• Sealed alloy gears instead of chains
• Sealed ball-bearing rollers in masts
• 100% more steering ease with two wheel drive
• Power unit removal complete in 20 minutes
• Greater tire capacity equivalent load ratings

LIFT TRUCKS INC. W.W.W. STUEBING CINCINNATI

Write for Bulletin KHL

A TRUCK FOR EVERY PURPOSE AND MATERIAL

LIFT TRUCKS, INC. CINCINNATI 14, OHIO

▲ For more details circle NED-286 F9 on enclosed inquiry slip ▲

Direct-Air VALVES for Easy AUTOMATION

COMPLETE VALVE CATALOG Ready!

MEADMATIC

4-way pilot-operated air valve for direct or remote control—no delicate electrical hookup needed.

A light momentary touch on limit switch actuates main valve piston—response is instantaneous! Catalog free.

Write today!

THE MEAD MAN CAN HELP YOU CUT COSTS Now!

MEAD SPECIALTIES COMPANY
4114 N. Knox Ave., Dept. NA-69, Chicago 41, Ill.

PATHFINDER IN AIR POWER AUTOMATION

▲ For more details circle NED-287 F9 on enclosed inquiry slip ▲

Veelos Knocks Out Belt Vibration... Up To 90%!

HERE'S PROOF! With an electronic vibration analyzer, your Manheim Veelos representative can measure the exact vibration in your machines. This test is absolutely free and is offered as conclusive proof that Veelos Adjustable V-Belts are better for your drives.

TEST YOUR BELTS! Test Veelos belts against the V-belts you're now using—convince yourself, in this 15 minute test, that Veelos cuts V-belt vibration up to 90%. Smooth running Veelos saves you money by cutting down bearing wear, work spoilage, etc.

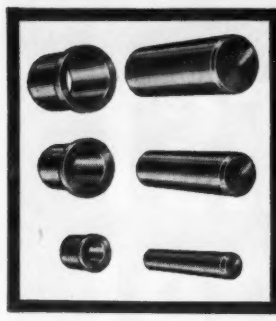
Write for free Vibration Demonstration or Free Veelos Data Book to:

MANHEIM
MANUFACTURING & BELTING CO.
Manheim 4, Penna.

VEELOS THE BALANCED LINK V BELT

Veelos is known as Veelink outside U.S.A.

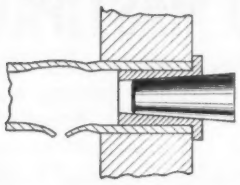
▲ For more details circle NED-288 F9 on enclosed inquiry slip ▲



2-piece design of ELLIOTT TUBE PLUGS offers many advantages

For Condenser and Heat Exchanger Tubes

- Quickly and effectively seals off leaky tubes without damage to tube sheets.
- Matching tapered ring and pin engineered for easy installation and dependable service.
- Designed to give even expansion of pin to ring and long contact to the seal.



EASY APPLICATION

- Place ring in tube
- Insert pin in ring, tap lightly until seated
- A few sharp blows with hammer make tight, effective seal

Available in brass, steel, stainless steel and aluminum.

ELLIOTT Company
LAGONDA PLANT, SPRINGFIELD, OHIO

Y8-4

For more details circle NED-289 F9 on enclosed inquiry slip

NO OTHER TRUCKS
move so much for so little

...more AMERICAN HAND TRUCKS are being used today than any other make!

they are:
- Low in Cost
- Light in Weight
- Designed for Heavy Duty
- All Pressed-Steel Construction
- Equipped with Steelite® Wheels
- Perfectly Balanced

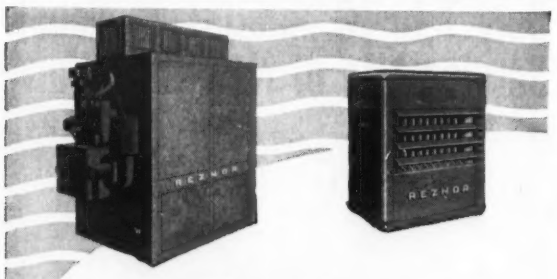
Every Truck is Guaranteed for Five Years

There's an AMERICAN PULLEY Truck Distributor near you—call him

products of... **AMERICAN** Pressed-Steel HAND and PLATFORM TRUCKS

The American Pulley Company
PHILADELPHIA 29, PENNSYLVANIA

For more details circle NED-290 F9 on enclosed inquiry slip



low maintenance cost

It costs you next to nothing to maintain your heating system when you have Reznor gas heaters. A few minutes per heater once a year for motor lubrication should be your total maintenance time. And no skilled labor is required. Heater failures? Simple, fool-proof design and quality construction make them a rarity.

LOW MAINTENANCE COST is just one of many reasons why Reznor gas unit heaters are right for so many plant heating jobs. Whether you need one heater to eliminate a "trouble" spot or enough units for a complete plant heating system, ask your Reznor distributor for details or write for your free copy of "Modern Heating".

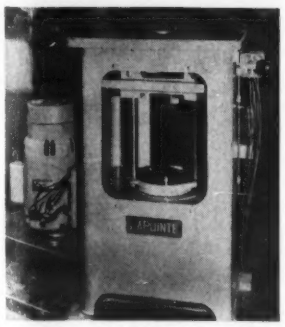
Look for Reznor under "Heaters-Unit" in the Yellow Pages

REZNOR WORLD'S LARGEST-SELLING DIRECT-FIRED **UNIT HEATERS**

Reznor Manufacturing Company, 41 Union Street, Mercer, Pa.

For more details circle NED-291 F9 on enclosed inquiry slip

BROACHING MACHINE
low cost pull down type unit



Two cutting speeds and a stroke adjusting mechanism are standard on the Eager Beaver pull down type broaching machine. Tooling, coolant system, and electrical equipment are extra. The bench size machine is rated at 1½ tons at 5 fpm broaching speed and ¾ ton at 10 fpm. It has a 12-in. stroke, 1½-in. hole in the drawhead, 5-in. hole in the platen, and a platen working surface of 17 x 18½ in. The 20 x 31 x 34-in. machine is self-contained, portable, and plugs into any 110-v outlet. Price is $970. Made by **Lapointe Machine Tool Co.**, Hudson, Mass.

For more details circle NED-292 F9 on enclosed inquiry slip

LIGHTWEIGHT SAFETY CAP
weighs less than 8 oz

Made of contoured polyethylene, the GenTex lightweight safety cap weighs less than 8 oz and has a shock-absorbing acetate headband which adjusts to fit all head sizes, plus a plastic foam cushion on inside of the crown. Impact resistance is in excess of 20 ft-lb. Cap is made in peaked models only and is intended for workmen exposed to head injury in tight working quarters. It is not designed to protect against heavy falling objects. Cap is available with sound-attenuating equipment. Made by **GenTex Corp.**, 450 Seventh Ave., New York 1, N. Y.

For more details circle NED-293 F9 on enclosed inquiry slip

TIMING MOTOR
sealed against entry of moisture

Chart drives and timing devices are among the applications for this sealed MP11 timing motor which is protected against corrosive atmospheres found in chemical and processing plants. Leads are quick-disconnect spade type with holes for soldered connections, if desired. The synchronous motor has a torque of 30 oz-in. at 1 rpm and speed is constant over a 103 to 132-v ac range. It is available for 120 or 240 v operation at 50 or 60 cps with standard shaft speeds from 1/60 to 60 rpm. Made by **General Time Corp.**, Haydon Div., 245 E. Elm St., Torrington, Conn.

For more details circle NED-294 F9 on enclosed inquiry slip

PREMIER FIRST—BOLD NEW VACUUM CLEANER DESIGN

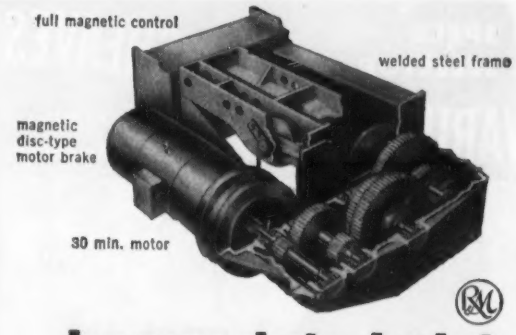
- New Patented Filter —No. 2814357
- 80% more filter area
- 50% more power
- non-clog design
- 15 gal. *usable* tank capacity

For FREE information on the P1005, the versatile Model 150 Blower and other Premier vacuums and floor machines, fill in and mail this request form. Do it today!

THE PREMIER COMPANY
Dept. 103, 755 Woodlawn Ave., St. Paul 16, Minn.
In Canada: 35 Gerrard St. West, Toronto 2
Attention: Gordon L. Bowman, V.P. & Sales Mgr.
Please rush me FREE details on Premier Industrial Vacuums. Thank you.

NAME_____
COMPANY_____
ADDRESS_____
CITY_____ STATE_____

For more details circle NED-295 F9 on enclosed inquiry slip



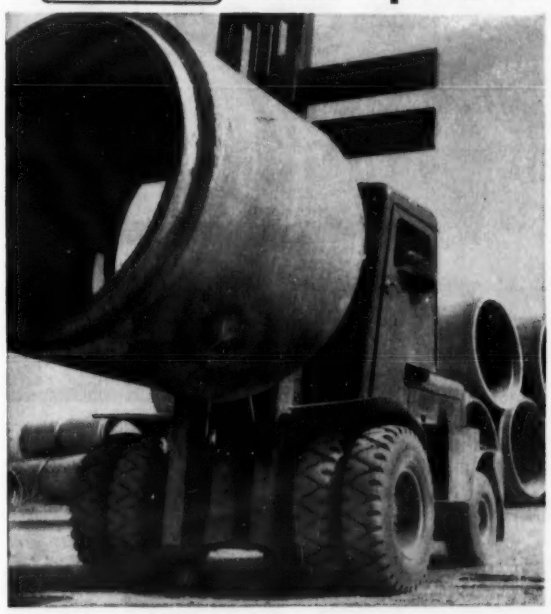
heavy duty hoist

CAPACITIES: ½ to 10 tons—Type F hoists, in four frame sizes, give you low headroom clearance plus rugged simplicity for demanding service. All-steel frame is welded for rigidity. R&M 1½ to 12½ hp motors have the highest time rating found in any standard hoist—30 min., 55° C. Load brake, three reductions of machined alloy steel heat treated gears and anti-friction bearings operate in splash oil bath. Motor brake is magnetic disc-type. Fully magnetic control features reduced push-button voltage. Wide choice of speeds and lifts. Plain, hand geared or motorized trolleys, or lug mounting. Request Bulletin 801-C today. **Robbins & Myers, Inc., Hoist & Crane Division, Springfield, Ohio.**

take it up with ROBBINS & MYERS
hoists cranes

For more details circle NED-296 F9 on enclosed inquiry slip

B.F.Goodrich **Tire and Wheel Analysis Man reports...**



B.F.Goodrich "Wired" tires give 5 times the service of other makes, still going strong!

Problem: Lift truck tires used at Toledo Concrete Pipe Co. blew out 2 and 3 times a month, lasted only 6 months. The trouble was caused by scraps of wire reinforcing rods used in pipe construction. Tire and maintenance costs skyrocketed.

Solution: The B.F.Goodrich Tire and Wheel Analysis Man studied the company's complete materials handling setup—then recommended tires designed for this type of work: new B.F.Goodrich "Wired" tires. A special shield of steel wire mesh under the tread protects the tire body from punctures and blowouts.

Results: "B.F.Goodrich 'Wired' tires have been in use 2½ years and to date there have been no repairs," writes Plant Supt. Raymond L. Edwards. In addition, the company has saved 200% on tire costs.

This report is typical of the savings B.F.Goodrich TW Analysis Men can make for industrial tire users. Their services are without cost or obligation—their recommendations unbiased because B.F.Goodrich makes a complete line of industrial tires. To find out how *you* can save, mail the coupon today. A special consulting service is available to manufacturers of materials handling equipment.

Specify B.F.Goodrich tires when ordering new equipment

B.F.Goodrich **Smileage!**

The B.F.Goodrich Company
Department TW-778,
Akron 18, Ohio

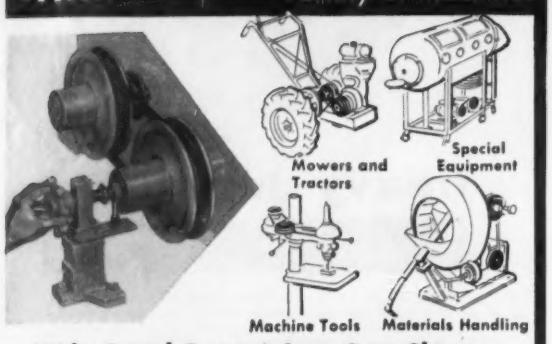
I would like further information on your FREE TW Analysis.

NAME_____
COMPANY_____
STREET_____
CITY_____ ZONE_____ STATE_____

© The B.F.Goodrich Company
B.F.Goodrich *industrial tires*

For more details circle NED-297 F9 on enclosed inquiry slip

SPEED SELECTOR
VARIABLE PITCH SHEAVES
Control Speeds on Variety of Machines



Wide Speed Range! Low Cost Sheaves

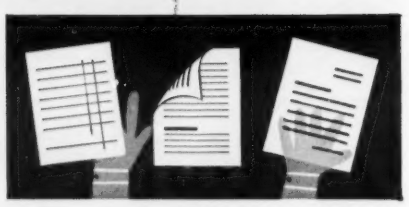
Speed Selector Sheaves can give your machines or equipment extra wide-range speed control on fixed centers. Efficient, rugged, simple to use — low in cost! Write for Illustrated Bulletin.

CATALOG FREE! WRITE TODAY

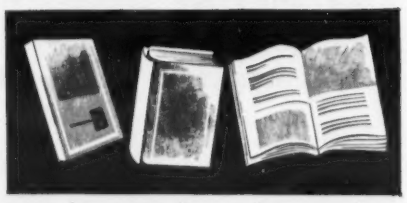
SPEED SELECTOR INC.
P.O. BOX 312-N • CHAGRIN FALLS, OHIO
▲ For more details circle NED-298 F9 on enclosed inquiry slip ▲

need a good copy fast ?

... of anything printed, duplicated, typed, written, drawn or photographed?

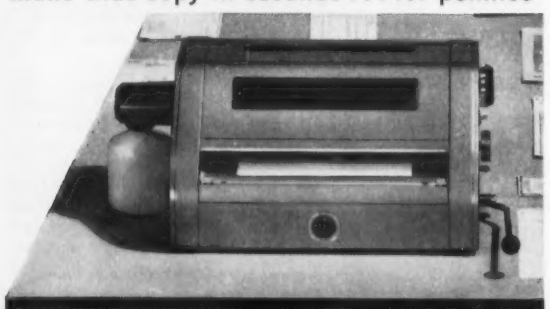


... from opaque, two-sided or transparent paper



... heavy cardboard, pages bound in books or magazines?

Make that copy in seconds ... for pennies



NEW A. B. DICK PHOTOCOPIER

FREE! Test sheet and photocopy that demonstrate complete range of A. B. Dick Photocopier.

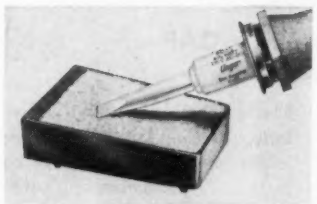
A. B. DICK COMPANY, 5700 West Touhy Ave., Chicago 48, Illinois
▲ For more details circle NED-299 F9 on enclosed inquiry slip ▲

RIVETING TOOL installs pull type blind fasteners

Operating on 90-psi air pressure, the 10-lb Model 200 Pneu-Hydra tool will install blind rivets and Huckbolt fasteners requiring up to 3000 lb installation force. Working stroke is 1¼ in. With one pull of trigger, tool grips pull grooves on pin shank and pulls until pintail separates at the breakneck groove. Made by **Huck Mfg. Co.**, 2480 Bellevue Ave., Detroit 7, Mich.

▲ For more details circle NED-300 F9 on enclosed inquiry slip ▲

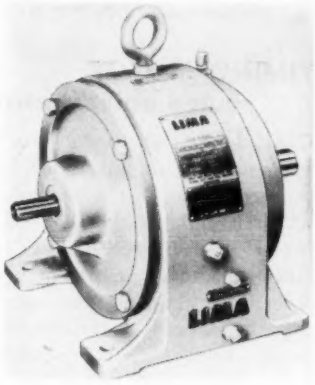
SOLDERING IRON CLEANER assures tip cleanliness



Solder connection failures are minimized when iron tips are kept clean with this Kleen-Tip sponge and tray. A light wiping of the tip across the sponge removes oxidation, lint, filings, and other impurities. Large or small, plated or unplated tips are cleaned thoroughly on the sponge without damage. It removes oxidation, leaving tip metallurgically clean. Unit is nonbreakable and attaches to bench. Made by **Ungar Electric Tools, Inc.**, 4101 Redwood Ave., Los Angeles 66, Calif.

▲ For more details circle NED-301 F9 on enclosed inquiry slip ▲

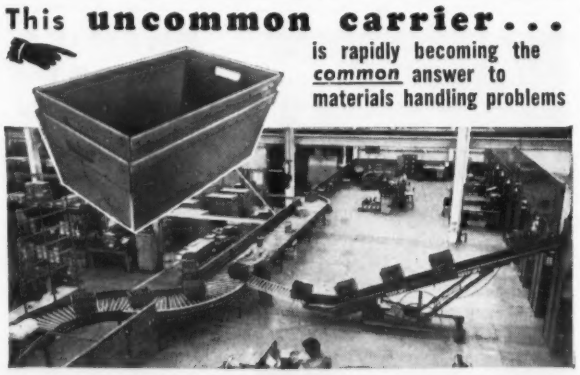
SPEED REDUCERS have ratios from 5.06:1 to 1478:1



Foot mount, flange mount, or flange mount with extended housing are available in these straight-line speed reducers. All are offered in 5.06:1 to 1478:1 ratios, capacities of 0.077 to 147 hp, and output speeds from 0.49 to 350 rpm. Rigid cast housings of unit case design cannot be distorted by overhung loads, uneven mounting surfaces, or accidental impact. Only removal of endbell is required for inspection or ratio change. Oil mist lubrication is incorporated. Low noise level gearing has wide-faced, fine-pitched gears which run with low pitch line velocities. Made by **Lima Electric Motor Co.**, Dept. 124, Lima, Ohio.

▲ For more details circle NED-302 F9 on enclosed inquiry slip ▲

This uncommon carrier ... is rapidly becoming the common answer to materials handling problems



HERE'S HOW DOUGLAS AIRCRAFT USES CONVOY #T-31 TOTE BOXES TO SPEED COMPONENTS TO ASSEMBLY

We make many standard size tote boxes . . . nesting, stacking and vertical sided . . . but we'll custom-make any box your product or use calls for.

Special sizes and shapes are economically produced by our "Chem-Board" process of rigidizing hi-test corrugated board to remarkable strength.

More and more famous name industries are using Convoy Tote Boxes. Try us.

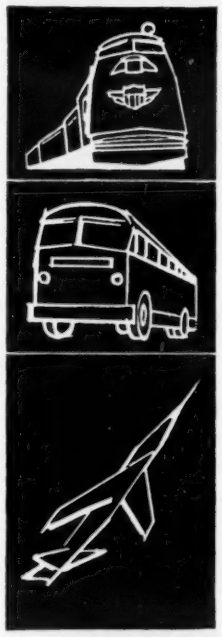
CONVOY, INC.
CANTON 6, OHIO
P. O. Station B, Box 216-N
GReenwood 7-4569
▲ For more details circle NED-303 F9 on enclosed inquiry slip ▲

SAFEST FLOOR!

GRIP-TREAD MASTIPAVE

Traction surface prevents falls, accidents! Takes brutal beating for years without showing a sign of wear! Deadens noise, insulates. Stays clean with less care, less cost. Lay low-cost Grip-Tread Mastipave in rolls anywhere without surface preparation. Get all the facts!

FREE ILLUSTRATED BOOKLET!
Send for "Every Building Needs Pabco Mastipave." Case histories, technical data. Pabco Mastipave, Fibreboard Paper Products Corp., 475 Brannan St., San Francisco
▲ For more details circle NED-304 F9 on enclosed inquiry slip ▲



EVERY TYPE OF TRANSPORTATION EQUIPMENT MUST BE ASSEMBLED...

EVERY TYPE OF TRANSPORTATION EQUIPMENT IS ASSEMBLED...

WITH APEX FASTENING TOOLS

Write, on your company letterhead please, for
CATALOG 30-A Nut Running Tools to ⅝" sq. dr.
CATALOG 30-B Nut Running Tools to 3½" sq. dr.
CATALOG 30-C Screwdriving Tools
CATALOG 30-D Miscellaneous Tools

Ask APEX for the answer to your fastening problem!

THE APEX MACHINE & TOOL COMPANY
1046 S. Patterson Blvd., Dayton 1, Ohio
▲ For more details circle NED-305 F9 on enclosed inquiry slip ▲

Only 7 to 10 Minutes to Renew Service Life of New Gate Valve

Replace seat rings in Fairbanks patented Renewable Seat Ring Gate Valves without removing valve body from line.

For the first time in valve history, you can replace the seat rings in a renewable seat ring gate valve, under all normal conditions, in less than 10 minutes, using just a screw-driver and *with the valve body still installed in the line* through an exclusive and patented development of The Fairbanks Company.

Fairbanks new 200 pound steam working pressure gate valves, available in sizes ½" through 2" in the rising and non-rising stem construction, have been field tested for over two years under all conditions from steam to corrosive liquids and have proven completely satisfactory—absolutely dependable.

FREE: Brochure, complete with details and specifications, yours without charge. Write today.

® THE Fairbanks COMPANY
393 Lafayette Street, New York 3, N. Y.
Branches: New York 3 • Boston 10 • Pittsburgh 22 • Rome, Georgia
Valves • Trucks • Casters • Wheels • Dart & "PIC" Unions
▲ For more details circle NED-306 F9 on enclosed inquiry slip ▲

Mr. Hi Frequency, the Electronic

THIS electronic sleuth stops the criminal destruction of quality by detecting stray metal particles in your process or production line. Magnetic or non-magnetic metal particles, no matter how deeply embedded, immediately trigger a warning or reject mechanism when they pass the compact Allis-Chalmers metal detector.

This device is economical to operate, permits conveyor speeds to 600 fpm, and is easily incorporated into any production setup. Ask your local A-C man for Bulletin 15B7217B, or write Allis-Chalmers, Industrial Equipment Division, Milwaukee 1, Wisconsin.

ALLIS-CHALMERS A-5628

▲ For more details circle NED-307 F9 on enclosed inquiry slip ▲

- Removing chips, shavings, filings, and airborne debris that clog machinery, distort tolerances, mar product finishes.
- Controlling mists and fogs in wet machining operations.
- Recovering valuable dusts, coolants, heated air.
- Protecting machinery investments with preventive maintenance.

FREE...latest specs and data on TORIT Dust Collectors for handling these and other air pollution problems. TORIT: the high efficiency line with savings up to 1/2!

- Reducing absenteeism with improved health and safety precautions.

WRITE TODAY:

TORIT MANUFACTURING CO.
Walnut & Exchange Sts., St. Paul 2, Minn., Dept. 214

▲ For more details circle NED-308 F9 on enclosed inquiry slip ▲

VOLT-AMMETER
now in safety yellow color

Pocket-size Amprobe Junior snap-around volt-ammeter is now offered in safety yellow to conform with standard safety practices. It is available in 25, 50, or 100-amp full-scale ranges for either 125/250 or 150/600 v. Accuracy of both voltage and current readings is ±3 per cent of full scale. Unit is shaped and balanced for one hand trigger operation. Made by **Pyramid Instrument Corp.**, Amprobe Div., 630 Merrick Rd., Lynbrook, N. Y.

▲ For more details circle NED-310 F9 on enclosed inquiry slip ▲

BORING BARS
high speed steel and carbide tipped

Borite boring bars are available in standard sets of 3, 4, or 34 bars, either high speed steel or carbide tipped, and in sets of 6, high speed steel or carbide tipped, in special small sizes. They permit flat-bottom boring without changing tool or facing. Standard bars (left) have 3/8, 1/2, and 3/4-in. shank diameters, 1 1/4, 1 1/2, and 2-in. shank lengths, and 1/4 to 3/4-in. minimum bore diameters. Maximum bore depths range from 1 to 3 1/2 in. and over-all lengths from 2 3/8 to 5 5/8 in. Small bars (right) have 3/8 and 1/2-in. shank diameters, 2-in. shank length, 1/16 to 1/4-in. minimum bore diameter, and 5/16 to 1 1/4-in. maximum bore depths. Lengths are from 2 5/16 to 3 1/4 in. Available from **Smith Tool Sales, Inc.**, 19333 James Couzens Highway, Detroit 35, Mich.

▲ For more details circle NED-311 F9 on enclosed inquiry slip ▲

VARIABLE CAPACITOR
maximum capacitance is 4.4 mfd

Close tolerance adjustment and continuous adjustability are features of the Brad-Cap variable capacitor. Maximum capacitance is as much as 4.4 mfd. It has accurate repeatability, adjustable capacity standards, integrating circuits, and low and high pass filters. Temperature range for operating and storage is −20 to 100° C, and maximum voltage is 200 v ac, 40 1 dc. Wide range of standard types meet many requirements. Made by **Plastic Capacitors, Inc.**, 2620 N. Clybourn Ave., Chicago 14, Ill.

▲ For more details circle NED-312 F9 on enclosed inquiry slip ▲

No question about it

. . . LINK-BELT has the right elevator bucket for the widest variety of materials and capacities

Long-lasting elevating efficiency is a certainty with Link-Belt cast buckets. Their smooth surfaces, well-rounded corners and proper proportioning assure quick filling . . . fast, clean discharge. And they're reinforced at points of greatest stress to resist wear and distortion. These exceptionally durable buckets are available in malleable iron or Promal. For complete facts and specifications write for Book 1050.

STYLE AA — Recommended for heavy, gritty materials such as sand, gravel, stone. Has a reinforced lip for digging and added wear life.

STYLE B—Used on inclined elevators handling coarse materials. Low front design assures clean discharge at relatively low speeds.

STYLE C — Designed for easy, efficient handling of finely pulverized or wet materials that have a tendency to stick or pack.

STYLE D — This continuous type bucket provides clean, gentle handling of coal, sand, gravel, crushed stone and other dry materials.

STYLE SC — Ideal for elevating either dry or relatively wet materials. Can handle greater capacities than styles A or C.

MALLEABLE CAST AND STEEL FABRICATED

All Link-Belt steel buckets are of welded construction . . . all are formed of heavy-gauge steel. HS type is designed for high-speed and maximum capacity. Salem buckets are shaped for proper filling and free discharge of granular, powdered, free-flowing materials. Continuous buckets offer clean discharge at low speeds of crushed stone, ore, coal and other bulky, gritty materials.

For full information, contact your nearest Link-Belt office or authorized stock-carrying distributor. Write for Book 1050.

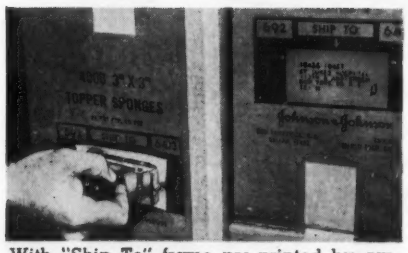
LINK-BELT 15,088

ELEVATOR BUCKETS

LINK-BELT COMPANY, Prudential Plaza, Chicago 1, Ill.

▲ For more details circle NED-313 F9 on enclosed inquiry slip ▲

Type One Stencil to Address Hundreds of Shipping Cartons



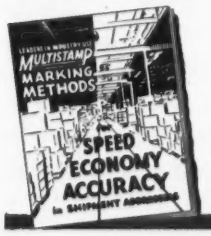
With "Ship To" frame pre-printed by carton maker, shipping clerk uses Multistamp Duplicator to address up to 1000 pieces of the same shipment with the same low-cost stencil . . identically, accurately, quickly, easily.

Stencils for Model 1-A Multistamp duplicator have printing area 3 1/4" x 1 3/8" . . up to 8 typewritten lines. Complete No. 1-A outfit, with supplies, instruction book, in sturdy case, $12.50.

Multistamp® Stencil Addressing System STOPS Errors!

Using Multistamp FORM-CUT stencil, printing the form and fill-in data at the same time is an easy, one man—one hand—operation. Your form is custom die-cut in the stencils . . you fill them in with ball point pen or typewriter.

Stencils for Model 3 Multistamp duplicator have printing area 5 1/4" x 3 3/16" . . up to 19 typewritten lines. Complete No. 3 outfit, with supplies, instruction book, in sturdy case, $19.50.



VOLUME-PAK Stencils

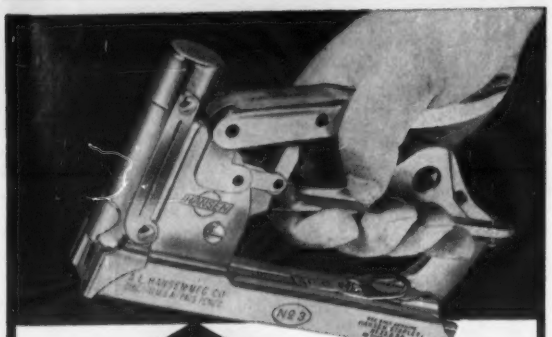
both plain and FORM-CUT save big money for quantity users. One-day service on repeat FORM-CUT stencil orders . . less than 10 days on new orders.

Write Today for your Free copy of the illustrated new how-to- (and why) book about the MULTISTAMP Marking Methods.

MULTISTAMP® STENCIL DUPLICATOR

THE MULTISTAMP CO. NORFOLK, VA.

▲ For more details circle NED-309 F9 on enclosed inquiry slip ▲



POINTS THE WAY TO SPEEDIER TACKING!

FOR Displays, Decorations, Insulation, Labeling, . . . other uses

WRITE for free Hansen Booklet.

36 MODELS 80 STAPLE SIZES

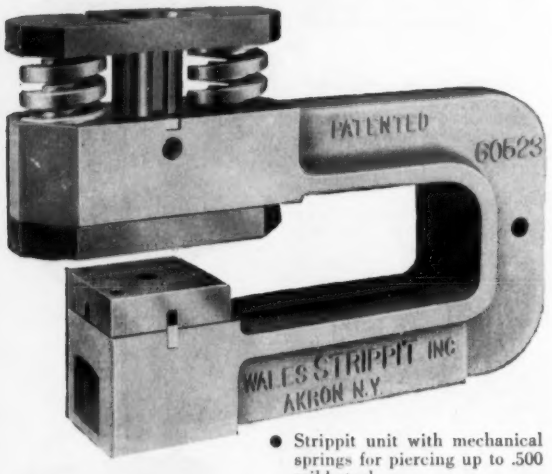
HANSEN AUTOMATIC TACKERS

The clean, well-built design of Hansen Tackers, plus their rugged construction, points the way to faster, easier tacking. Insist on Hansen . . . for the best in Tackers.

A. L. HANSEN MFG. CO.
5024 Ravenswood Ave.
Chicago 40, Illinois

▲ For more details circle NED-314 F9 on enclosed inquiry slip ▲

new STRIPPIT PUNCHING UNITS with DUAL-RANGE capacity!



● Strippit unit with mechanical springs for piercing up to .500 mild steel.

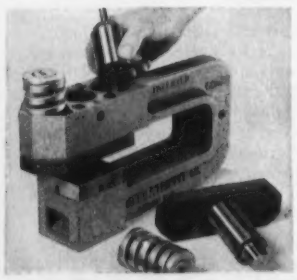
- Up to .500 mild steel, using removable Strippit mechanical springs
- Up to .750 mild steel, with interchangeable Strippit Hydra-Springs
- Convertible from .500 to .750 capacity in seconds, at minimum cost
- One heavy-duty holder for both capacity ranges
- Readily replaceable punch tips and dies—round, obround, square, shaped
- Keyed punch body keeps punches accurately aligned

USING STRIPPIT MECHANICAL SPRINGS

Max. punch dia.	Max. material thickness (mild steel)
1.375	.250
1.250	.375
1.125	.500

USING STRIPPIT HYDRA-SPRINGS

Max. punch dia.	Max. material thickness (mild steel)
1.375	.375
1.250	.500
1.125	.625
1.000	.750



◀ Mechanical springs are easily replaced with Hydra-Springs for punching up to .750 mild steel.

WRITE TODAY for the new Strippit General Catalog. It covers all details on this and all other Strippit units . . . plus the savings in tooling and press time effected with the famous cost-cutting Strippit System of fabrication.

WALES STRIPPIT INC.
227 Buell Road, Akron, New York

HOUDAILLE INDUSTRIES, INC.

Manufactured in Canada by: Strippit Tool & Machine Company, Brampton, Ont.

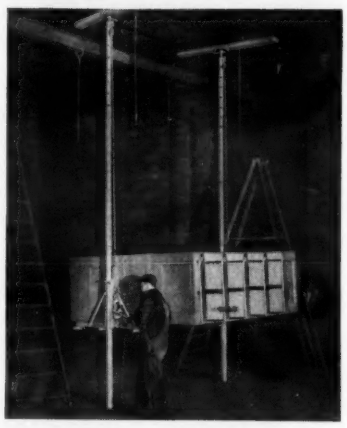
▲ For more details circle NED-315 F9 on enclosed inquiry slip ▲

VACUUM CLEANERS have three-stage motor fan system

Waterlift of over 51 in. measured with a 5/8-in. orifice at the end of a 10-ft hose and a closed waterlift of 76 in. are featured by the Jetstream vacuum cleaner line. A three-stage, by-pass motor fan system for wet and dry pick-up replaces the previous two-stage system. The exhaust is quiet. Motor is a heavy duty 1-hp ac-dc unit. Jet-stream line consists of four models with 10-gal capacity, tricycle base, and Kent autolift which facilitates emptying. Largest unit has an 1100 sq in. filter which can be shaken down without removing it from the cleaner. Smaller units have 800 sq in. disposable latex-impregnated bags as primary filters and a cloth filter with 400 sq in. of filter area. Made by **Kent Co.**, 827 Canal St., Rome, N. Y.

▲ For more details circle NED-316 F9 on enclosed inquiry slip ▲

PORTABLE EQUIPMENT LIFT two men can hoist 4000 lb to 24 ft



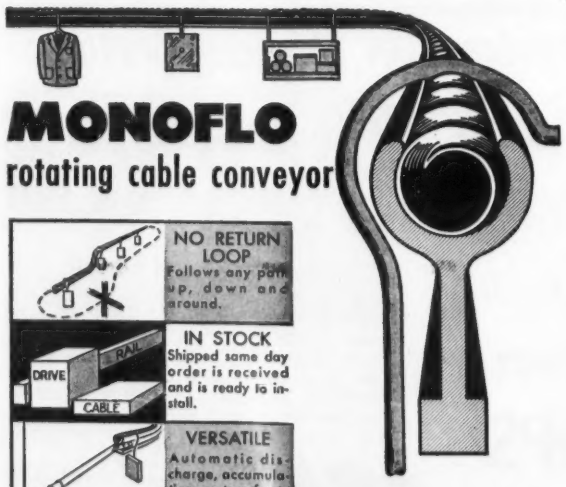
Two men can hoist air handling units, horizontal furnaces, compressors, or unit heaters weighing up to 4000 lb to height of 24 ft with the Hoist-It portable lift. It consists of two telescoping posts which are set up to fit snugly from floor to ceiling or joists. Hoisting bracket or platform on which load rests is pulled upward between the two vertical posts by means of two cable-hoists fastened to the top of each post. Lift does not have to be anchored to joists or trusses and can be used in finished rooms without damage to ceilings. Workers can use the platform while connecting up the equipment. Made by **Hastings Air Control, Inc.**, 3215 Leavenworth St., Omaha 5, Nebr.

▲ For more details circle NED-317 F9 on enclosed inquiry slip ▲

Electrical Crane Equipment

Harnischfeger Corp.—Design, operation, and performance characteristics of the P & H line of electrical and electronic equipment for overhead cranes are found in 32-page illustrated Bulletin C5-2. Stepless crane control, Magnetorque AC crane control, Hook-A-Weigh precision weighing device, and other pieces of equipment are detailed.

▲ For more details circle NED-318 F9 on enclosed inquiry slip ▲



MONOFLO rotating cable conveyor

NO RETURN LOOP — Follows any path up, down and around.

IN STOCK — Shipped same day order is received and is ready to install.

VERSATILE — Automatic discharge, accumulation, or transfer to another conveyor.

INVOICE ½ — LOW COST — Far under price of any other power conveyor.

INSTALLED ½ DAY — By any mechanic with simple tools.

Full size section thru MONOFLO CONVEYOR

Hundreds of MONOFLOS working in Electronics, Metal Parts, Autos, Atomics, Missiles, Printed Circuits, Garments, Laundries, Glass, Food, Rubber, Plastics, Instruments.

They deliver parts, return empty jigs, accumulate parts and carry parts thru heating, cooling, painting, baking, etching, drying.

M-H STANDARD CORPORATION
515 Communipaw Ave., Jersey City 4, N. J.

▲ For more details circle NED-319 F9 on enclosed inquiry slip ▲

BEVERLY THROATLESS SHEARS

MAKE CUTS LIKE THESE

QUICKLY... EASILY... ACCURATELY

18 ga. metal cut with Model B-1 Shear.

Save time, labor and material—use a Beverly to make any cut . . . straight, curved or irregular in any metal. Exclusive design allows work to be turned at any angle while cutting. Standard in the industry for years. 4 models—capacities to 1/4" mild.

See your Beverly Distributor for a demonstration. Write for FREE illustrated circular on Beverly metal cutting Shears.

MODEL B-3 with ball bearing hold down. Cap. 3/16" mild; 10 gauge stainless.

Beverly SHEAR MFG. CO.
3016 W. 111th STREET • CHICAGO 43, ILLINOIS

▲ For more details circle NED-320 F9 on enclosed inquiry slip ▲

TO INCREASE PRESS EFFICIENCY

MINSTER® CLUTCHES FOR PRESS CONVERSIONS

MINSTER Combination Air Friction Clutch and Brake — made by a press manufacturer who knows your problems.

Here's why it is profitable to convert to Minster Clutches:

- Eliminates down time because of clutch failure
- Reduces maintenance by eliminating costly and frequent parts replacement
- Increases die life because of smooth, shock-free clutch engagement
- Reduces operator fatigue and improves safety because press is easier to operate, easier to control
- More productive cycles per hour on single cycle operation
- Easier, more rapid die setting

Bulletin CC 57 describes Minster Clutches for press conversion. Copy by request on company letterhead.

THE MINSTER MACHINE COMPANY
MINSTER, OHIO

▲ For more details circle NED-321 F9 on enclosed inquiry slip ▲

OUTPERFORMS BAND SAWS COSTING 3 TIMES AS MUCH

LOCKFORMER®

BAND SAW

★ 100 to 3000 F.P.M. Blade Speeds
★ 2 and 3-Wheel Models
★ 13½" and 24" Throats

Designed especially for fast, production cutting on metal, plastics or wood. Cuts iron, steel, forgings at 100 fpm, stacked galvanized sheets, bronze, brass and copper at 600 fpm, and stainless steel, wood or plastics at 3000 fpm. Compact, yet rugged enough for continuous, heavy duty cutting. Perfect blade control . . . no blade chatter. Table 20" x 22".

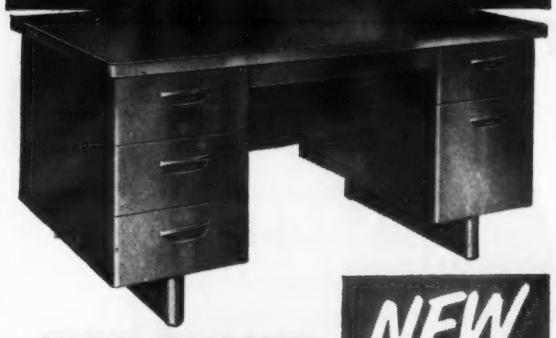
LOCKFORMER TIME SAVING, MONEY MAKING EQUIPMENT

MORE FACTS
Write for free copy of latest bulletin with the complete story
Manufactured by
THE LOCKFORMER CO.
Dept. N 4615 West Roosevelt Road
Chicago 50, Illinois

In Canada: Brown Boggs Foundry & Machine Co., Ltd., Hamilton, Ontario

▲ For more details circle NED-322 F9 on enclosed inquiry slip ▲

LYON OFFICE DESKS

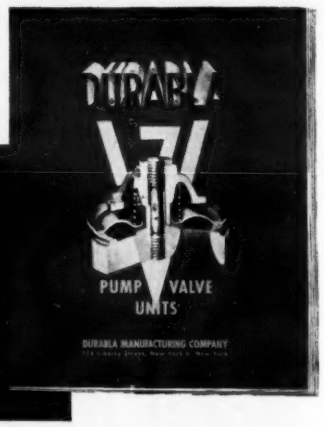


HIGH QUALITY LOW PRICE NEW

An unbeatable value—this Lyon 60" office desk. Welded construction throughout. Skid-type base has adjustable feet. 26" center drawer, interchangeable pedestal drawers. Attractive gray finish. Heavy-duty linoleum top. Nylon gliders on all drawers. Also available, 42" single-pedestal model—60" conference table. *Write for* Free Desk Bulletin No. 170.

LYON METAL PRODUCTS, INC.
General Offices: 122 Monroe Ave., Aurora, Illinois
Factories in Aurora, Illinois and York, Pa.
Dealers and Branches in all Principal Cities

▲ For more details circle **NED-323 F9** on enclosed inquiry slip ▲



DATA you need

to select improved valves for your pumps

Famous for sustained efficiency under widely varied service conditions, DURABLA Pump Valve Units have been redesigned to incorporate a new taper-lock* stud, self-locking nut and drop-on guard. This improved design offers *seven new points of superiority.*

The booklet shows how DURABLA Pump Valve Units can benefit your pumps. Includes design details, materials available, table of seat sizes and dimensions. Send for free copy of Form 400 NED69.

DURABLA MANUFACTURING COMPANY
114 Liberty Street, New York 6, N. Y.

DURABLA®

*Patent Pending DM-29

▲ For more details circle **NED-324 F9** on enclosed inquiry slip ▲

LYON® TOOL STANDS

STATIONARY OR PORTABLE MODELS

Dozens of uses for these sturdy steel tool stands—in toolrooms, stockrooms, on assembly lines.

Interchangeable trays attach at each corner with four bolts.

Available with glide feet or swivel type casters.

Drawers have padlock attachment and sliding tool tray

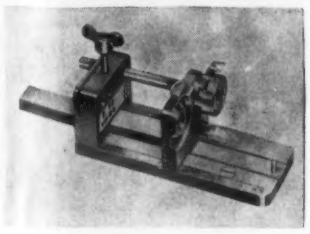
Drawers operate on ball bearing rollers. Finish, green baked-on enamel.

Write for free 84-Page Lyon Steel Equipment Catalog.

LYON METAL PRODUCTS, INC.
General Offices: 122 Monroe Ave., Aurora, Illinois
Factories in Aurora, Illinois and York, Pa.
Dealers and Branches in all Principal Cities

▲ For more details circle **NED-325 F9** on enclosed inquiry slip ▲

SHAFT CUTTING TOOL accurate to 1/64 in.



Component control and switch shafts can be cut accurately to length within 1/64 in. by the Shaft-Kut tool. The control or switch is inserted into the tool, the jib is set at the length desired on a scale, and the excess shaft is sawed off. Tool is made of case hardened tool steel and is priced at $4.95. Made by **Globe-Union Inc.**, Centralab Div., 900 E. Keefe Ave., Milwaukee 1, Wis.

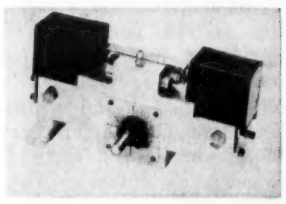
▲ For more details circle **NED-326 F9** on enclosed inquiry slip ▲

QUICK-CONNECT COUPLINGS for hoses, pipes, and tubing

Steel lock pins which permit high operating pressures and eliminate brinelling are incorporated in Roto-Lock all-purpose industrial couplings. They are suited for hose, pipe, or tubing lines handling raw crudes, processed liquids, and exotic fuels. The quick-connecting units have a low pressure drop (3.5 in. of water in the 1 in. size) and are furnished with standard fuel, water, air, and oil resistant and special gaskets. Locked position is indicated by audible "clicks" and by sight and feel. Several types of couplings are available in a wide range of sizes for industrial and aircraft uses. Carbon steel, aluminum, and other materials are offered. Made by **Roto-Lock Couplings, Inc.**, 4937 Firestone Blvd., South Gate, Calif.

▲ For more details circle **NED-327 F9** on enclosed inquiry slip ▲

ROTARY ACTUATOR permits 5-360 degree shaft rotation



Hydraulic input pressure from 50 to 1000 psi is converted into easily regulated reciprocating rotary motion by this self-contained rotary torque power unit. At 100 psi unit provides 500 lb-in. of working torque over a range of rotation from 5 to 360 degrees. The self-contained unit will self-reciprocate within its adjusted range of motion, as well as in semi-manual or full manual operation. Built-in speed adjustments allow control of rotary shaft speed in either or both directions. Electric solenoid actuation is available for either or both directions of rotation. Unit is also adaptable for use with air and/or vacuum power. Rotational accuracy is ±½ degree. Made by **Cleveland Pneumatic Industries, Inc.**, Industrial Sales Div., 64 Old Orchard, Skokie, Ill.

▲ For more details circle **NED-328 F9** on enclosed inquiry slip ▲

Send for valuable **FREE Bulletin 70** on Super Alloy Tubing

BRAND-NEW information on small diameter tubing of Super Alloys

This bulletin contains data on the properties of these important metals—and includes, among other things, a number of graphs showing the results of stress rupture and tensile tests. You will want a copy for handy reference.

Superior Super Alloy Tubing is being used where requirements are for high strength at high temperatures—in jet engines, missiles, gas and steam turbines, and many other applications in refineries and chemical processing plants. We offer 15 different Super Alloys in tubing form, as well as stainless, carbon and alloy steels, nickel and nickel alloys, beryllium copper and titanium.

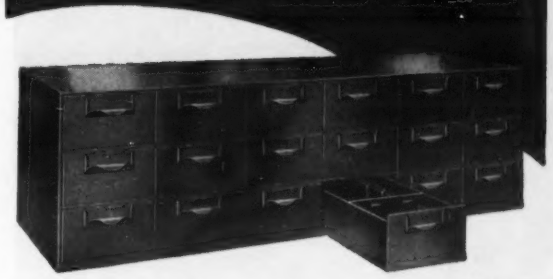
For your free copy of Bulletin 70, write Superior Tube Company, 2018 Germantown Ave., Norristown, Pa.

Superior Tube
The big name in small tubing
NORRISTOWN, PA.

All analyses .010 in. to ⅝ in. OD—certain analyses in light walls up to 2½ in. OD

▲ For more details circle **NED-329 F9** on enclosed inquiry slip ▲

LYON DRAWER CASE UNITS



These heavy-duty steel drawer case units provide your most convenient way to store small parts. Built to take a lifetime of hard usage. Dividers instantly adjustable every inch—permit quick rearrangement. Available in 12, 18 and 24 drawer units. Lyon green baked-on enamel finish.

Write for free 84-page Lyon Steel Equipment Catalog.

LYON METAL PRODUCTS, INC.
General Offices: 122 Monroe Ave., Aurora, Illinois
Factories in Aurora, Illinois and York, Pa.
Dealers and Branches in all Principal Cities

▲ For more details circle **NED-330 F9** on enclosed inquiry slip ▲

Don't spoil it- KROIL it!

Don't ruin a valuable piece of equipment merely because some part is rusted tight. Apply *KROIL*, the amazing new chemical lubricant that creeps into millionth inch spaces (proved by laboratory tests), **dissolves rust, supplies necessary lubrication and . . .**

Loosens Frozen Parts

11,000 of America's leading plants can't be wrong. They have used KROIL for ten years and depend on it to save expensive labor and valuable parts. They say: "Kroil loosened bushings after a 12-ton press had failed". . ."on repairing heat treat trolleys formerly destroyed every nut. Now KROIL saves them all, and time, too."

You too can get these results. Try KROIL on money-back basis.

Gallon, $3.85; with Kroiler squirt gun, $4.95, f. o. b. factory.

Ask for GENIUS AT WORK—a free publication full of ideas for maintenance men.

KANO LABS. 1074 Thompson Lane Nashville 11, Tenn.

▲ For more details circle **NED-331 F9** on enclosed inquiry slip ▲

LYON® BIN UNITS

SHIPPED SET UP . . . READY FOR USE

Use these sturdy steel bins wherever there are parts or small bulk or packaged items to be stored or displayed.

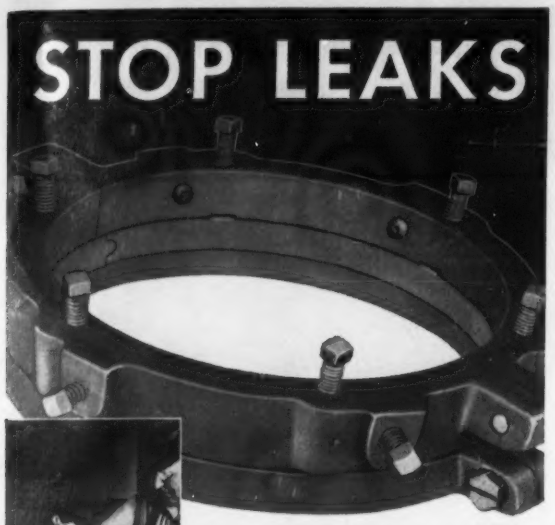
Steel bins are 3' wide, 1' deep, 6½' high. Shelves are adjustable up and down every 1½". Dividers adjustable horizontally every inch. Finished in durable green baked-on enamel. Available in a variety of bin arrangements to accommodate small, large or long items.

Write for free 84-page Steel Equipment Catalog.

LYON METAL PRODUCTS, INC.
General Offices: 122 Monroe Ave., Aurora, Illinois
Factories in Aurora, Illinois and York, Pa.
Dealers and Branches in all Principal Cities

▲ For more details circle **NED-332 F9** on enclosed inquiry slip ▲

STOP LEAKS



SKINNER-SEAL PIPE JOINT CLAMP stops leaks at joints where pipe is screwed into fitting. Any temperature—any pressure up to 2,000 pounds. Saves the cost of tearing out and renewing leaky fittings. Prevents shutdowns. Order from your local industrial distributor!

M. B. SKINNER CO., South Bend 21, Ind.—Established 1898

▲ For more details circle **NED-333 F9** on enclosed inquiry slip ▲

UTTERLY RIDICULOUS!

He wants to know why $5,000 in equipment was ruined...when for a few pennies it could have been equipped with

S.S.White PLASTIC PLUGS AND CAPS!

Don't let this happen to your customer! S.S. White plastic plugs and caps afford complete protection against damage to vital equipment during handling . . . shipping . . . storage. Remove in an instant, too, and never shred. He'll appreciate your forethought.

And *you* will appreciate their rapid installation that saves hours of production time . . . and, of course, their low cost!

Two lines to choose from:

The quality line – of rigid acetate...tough, non-brittle, impervious to petroleum-base oils and greases, outstanding impact strength.

The economy line – of elastoplastic vinylite . . . a "non-slip grip" for rapid installation and removal, a "stay-put fit."

WRITE FOR FREE BULLETIN
(P5708) and samples
(please state size and type)

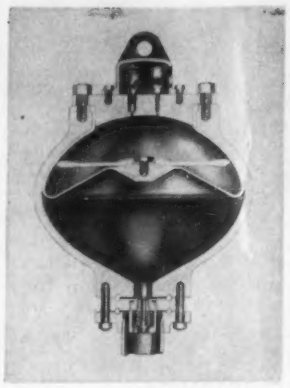
S.S.White PLASTICS DIVISION

1054

Dept. 7P • 10 East 40th Street • New York 16, N.Y.
Western Office: 1839 West Pico Blvd. • Los Angeles, Calif.

▲ For more details circle **NED-334 F9** on enclosed inquiry slip ▲

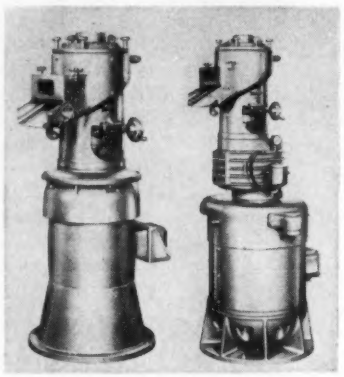
SURGE ABSORBER
installed in fluid handling lines



Line surges and pulsations caused by action of reciprocating pumps or quick closing of valves are controlled by the Hydril surge absorber. Usable on any fluid handling system, it consists of a thick-walled surge chamber in which a nonwrinkling diaphragm floats on the surface of the fluid entering from the line. Chamber above the diaphragm is precharged with gas to provide the pressure to force the diaphragm downward to effect displacement of the fluid through the outlet. Photo shows the surge absorber equipped with a by-pass check valve at the inlet. Made by **Hydril Co.**, 714 W. Olympic Blvd., Los Angeles 15, Calif.

▲ For more details circle **NED-335 F9** on enclosed inquiry slip ▲

GRINDING MILLS
use 8-in. Carborundum stones



Increased peripheral speeds and capacity to use 8-in. diameter Carborundum stones enable Series 800 and 2800 mills to realize a 30 to 50 per cent gain in capacity over former models. Model 800 has a peripheral speed of 7550 fpm at an operating speed of 3600 rpm on 60 cycles; speed of Model 2800 is 11,350 fpm at 5400 rpm, 60 cycles. Mills have 25 and 50 hp motors, respectively. Stone plate which carries the rotating stones utilizes a "screw effect" to wind materials out of the labyrinths. O-rings and grease seals keep foreign materials out and grease in. Made by **Morehouse-Cowles, Inc.**, 1150 San Fernando Rd., Los Angeles 65, Calif.

▲ For more details circle **NED-336 F9** on enclosed inquiry slip ▲

Wire of Many Types

Continental Steel Corp.—Coarse round, standard and special shaped, and fine and specialty wires in many finishes, analyses, and tempers in low and medium carbon steels are listed in this Wire Manual. Leverpak drum containers for 500 to 650 lb single-length coils, and Econo-Coils for 1600 to 3000-lb catchweight coils are covered. Many other data on wire are presented.

▲ For more details circle **NED-337 F9** on enclosed inquiry slip ▲

Compact, economical, safe. All revolving parts are covered. Instantly adjustable. Shreds ⅛" to ⅜". Designed for continuous and trouble-free service.

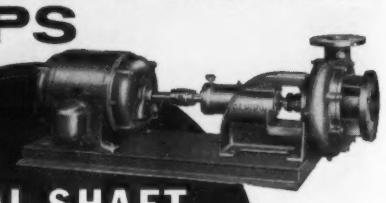
Quickly shreds newspapers, magazines, waste paper, cellophane, tissue, corrugated cartons, wax paper, etc. into uniform resilient 1/8" to 3/8" strands, ideal for packaging purposes. Especially adapted to shredding confidential records, blue prints or any classified material. Send for descriptive bulletin S1255. Names of users near you available on request.

FREE TRIAL! Operate a SHRED ALL for 30 days — if not satisfied — return — owe nothing.

UNIVERSAL SHREDDER CO.
2934 Bay Road — Saginaw, Michigan

▲ For more details circle **NED-338 F9** on enclosed inquiry slip ▲

DEMING END-SUCTION CENTRIFUGAL PUMPS



AXIAL SHAFT ADJUSTMENT

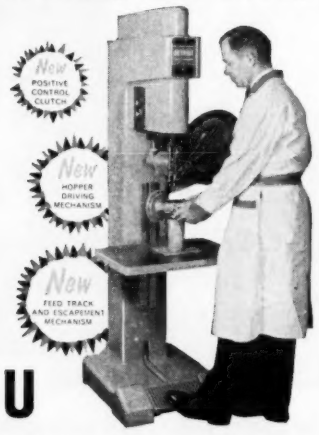
provides regulation of capacity and head, and adjustment for impeller wear. This can be performed while pump is operating. Bulletin 4011-C.

Just one of the many Deming pump features that provide longer life and lower operating costs

The DEMING Co.
606 BROADWAY • SALEM, OHIO

▲ For more details circle **NED-339 F9** on enclosed inquiry slip ▲

ALL NEW... through and through!



the DPS MODEL U

power screwdriving machine

Manufacturing assemblies with small parts? Take note! Detroit Power Screwdriver Company announces the totally new Model U—quickly adaptable for fast, clean driving of screws, nuts and studs.

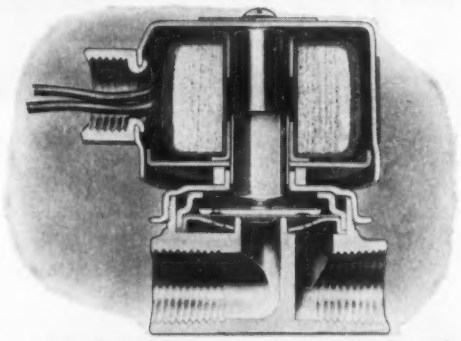
Scores of advances! An adjustable clutch designed to hold constant driving torques. A hopper drive with built-in slip control to accommodate shock loads. A feed track with quickly adjustable covers, and an escapement mechanism with positive solenoid action permitting release of screw by body or head.

A new folder, too. Write for your copy today.

DETROIT POWER SCREWDRIVER COMPANY 15,034
2819 W. Fort St. • Detroit 16, Michigan
A Subsidiary of Link-Belt Company

▲ For more details circle **NED-340 F9** on enclosed inquiry slip ▲

unlimited applications!



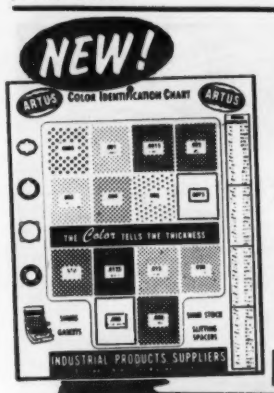
• for flow control of water, air, low pressure steam, brines, light oils, gases

JE INDUSTRIAL SOLENOID VALVES

5/16" to 1-1/2" Port Sizes—1/4" to 1-1/2" N.P.T. Connections
Write for information bulletin today.

Controls Division
JACKES-EVANS MANUFACTURING COMPANY
4427 Geraldine Ave., St. Louis 15, Mo.

▲ For more details circle **NED-341 F9** on enclosed inquiry slip ▲



A 'MUST' WHEREVER SHIMS ARE USED

ARTUS

PLASTIC SHIMS

THE COLOR TELLS THE THICKNESS

FREE
Write for this handy COLOR CHART, today!

Artus Plastic Shims are real time savers in production and maintenance. They're used by many of America's best known industrial corporations because they're more efficient, more convenient, always available.

Custom shapes to your specifications.

Write for Samples and Literature or Mail Blueprint for Test Sample.

THE ARTUS CORPORATION
201 South Dean St. • Englewood, New Jersey
LOwell 7-0900
formerly INDUSTRIAL PRODUCTS SUPPLIERS

▲ For more details circle NED-342 F9 on enclosed inquiry slip ▲

QUANTITY QUALITY QUICK

. . . yours with
SOCKET SCREW PRODUCTS by

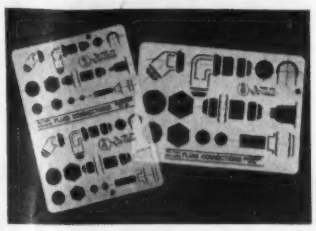
B-RIGHT-ON®

To get exactly *what* you want, *when* you want it, specify B-RIGHT-ON! Immediate service from selected mill supply houses' stocks. Write for detailed design-dimensional brochure!
COMPLETE SOCKET SCREW LINE!

® You can do better with B-RIGHT-ON!
THE BRIGHTON SCREW & MFG. CO.
1957 Reading Road, Cincinnati 2, Ohio

▲ For more details circle NED-343 F9 on enclosed inquiry slip ▲

DRAFTING TEMPLATES
cover major fluid line fittings



Based on MIL standards, five drafting templates cover major fluid line fittings in side and front elevations. Symbols are arranged to allow complete drawing without undue shifting of the template. Numbered 63 through 67, templates cover tube sizes 3 to 12. They are made of 0.030-in. thick mathematical-quality matte-finished plastic and have precision milled cutouts. Templates are priced at $2 and $3 each. Made by **Rapidesign, Inc.**, Box 429, Burbank, Calif.

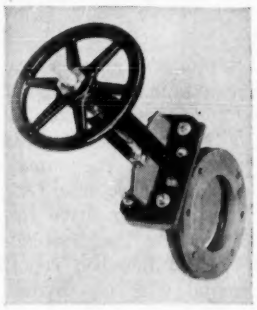
▲ For more details circle NED-345 F9 on enclosed inquiry slip ▲

FORCE & WEIGHING KITS
accurate to 0.05 and 0.10 per cent

Fast, on-the-spot calibration of testing machines, thrust stands, and conventional load measuring and weighing devices, and general single-point weighing operations can be done with C & S force calibrators and single-cell weighing kits. Both are direct-reading instruments, with no corrections or conversions required. Each kit is packaged in a single waterproof case weighing about 50 lb and contains all instrumentation for field use. Cell capacities are 5000, 10,000, 25,000, 50,000 and 100,000 lb. Kits operate on 115 v ac. Made by **Revere Corp. of America**, Wallingford, Conn.

▲ For more details circle NED-346 F9 on enclosed inquiry slip ▲

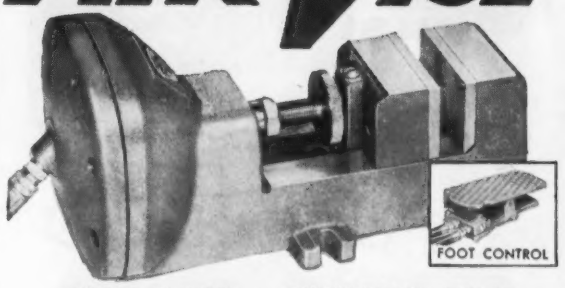
STAINLESS STEEL VALVES
handle corrosive liquids, sludges



Rovalve economy line of valves is suited for heavy duty service in handling corrosive liquids and sludges. Most parts of both Fig. 20 stock and general purpose, and Fig. 30 wedge gate types are designed for interchangeability with other Rovalves. Both can be equipped with motor, or air or hydraulic cylinder for automation. A third valve, Fig. 17, has drip-tight shutoff achieved through replaceable resilient seat. It can be used either as a stock valve or a wedge gate. Made by **W. G. Rovang & Associates, Inc.**, 1945 N. Columbia Blvd., Portland 17, Oreg.

▲ For more details circle NED-347 F9 on enclosed inquiry slip ▲

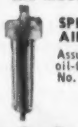
Speedy AIR VISE



HIGH SPEED • POWERFUL GRIP

New, improved model speeds up all repeat operations—*milling, drilling, tapping, punching, bending, riveting.* Both hands left free to produce more! Light squeeze to 2250 pounds pressure! Extra thick jaws for attaching jigs. Jaws open to 3-inches; 1/16" to 5/8" maximum travel. Complete with foot control, air hose and fittings..... $44.00

SPEEDY AIR REGULATOR
Regulates pressures 0 to 140 lbs.
No. 622 $7.25


SPEEDY AIR FILTER
Assures clean, oil-free air.
No. 140 $4.00

SPEEDY UNIT
Production spray unit with Ext. Mix Gun.
No. 705
$26.50

Order from Your Supplier or Write for Air Tool Catalog
W. R. BROWN CORP., 2647 N. Normandy Ave., Chicago 35

AIR TOOLS • AIR VISES • AIR REGULATORS • FILTERS • COMPRESSORS

▲ For more details circle NED-348 F9 on enclosed inquiry slip ▲

CUT HANDLING COSTS - - - STOCK MORE IN LESS SPACE

LOW-COST, STACKBIN-IN-STACKRACK UNITS PAY FOR THEMSELVES IN 3 WAYS

SAVE SPACE — Individual units stack easily and lock securely as high and as long as you need. Seven different size units available.

SPEED PRODUCTION — Stackbins reduce handling time. Can be used intra-plant in processing, sub-assembly, assembly and stockroom. Roller Bearing Slide Stackracks available for heavier contents. Locking Pallets supplied for unit load handling.

REDUCE INVENTORY TIME — Accessibility of Stackbins for weight count speeds inventory taking; visibility of contents simplifies control.

STACKBIN-IN-STACKRACK COMBINATIONS are made of heavy gauge steel with all welded construction and baked enamel finish.

LOW-COST STACKBIN PRODUCTS ARE SOLD DIRECT — A factory trained, Stackbin Sales Engineer will study your plant requirements, at no obligation, and will make specific recommendations for handling and storage efficiency. Buy only as many units as you need.

WRITE TODAY FOR FULL INFORMATION
STACKBIN CORP. 1081 Main St., Pawtucket, R. I.
Mfd. & sold exclusively in Canada by: Wickware-Stackbin, Ltd., "Perth"

STACKBIN "Stacked and Still Accessible" SYSTEM

▲ For more details circle NED-349 F9 on enclosed inquiry slip ▲

With a *Clarklift* Fork Truck!
you'll get over 30% more efficiency . . . lower operating costs!

★ You'll get over 30% more efficiency with a *Clarklift*
★ You'll get automatic transmission . . . simplified, directional controls
★ You'll get picture-window visibility . . . maintenance in minutes
★ You'll get more work done with a *Clarklift* . . . with lower operating costs

Judge for yourself. Send today for the new *Clarklift* features booklet. Use the reader service card or the coupon

CLARK® EQUIPMENT
Industrial Truck Division
CLARK EQUIPMENT COMPANY
Battle Creek 21, Michigan
CLARKLIFT is a trademark of Clark Equipment Company

With no obligation send me your free *CLARKLIFT* features booklet
Name_____ Title_____
Company_____
Address_____
City_____ Zone____ State_____

▲ For more details circle NED-344 F9 on enclosed inquiry slip ▲

specify...Cabot's

prevents rust

Cabot's Flexiblac®

Protect iron, steel and other metals from rust and corrosion with Flexiblac — the elastic, gloss black waterproof paint you can apply with brush or spray.

- Costs only ¼ as much as Red Lead
- Resists heat up to 350° • Will not crack or scale
- Does not conduct electricity
- Resists acids, alkalies and chemical fumes

Gives greater protection than Red Lead on all such metal surfaces as smokestacks, septic tanks, galvanized roofing, silos, gutters, downspouts, and water tanks — is non-toxic.

Write for your free sample Samuel Cabot

SAMUEL CABOT INC.
632 Oliver Building, Boston 9, Mass.

▲ For more details circle NED-350 F9 on enclosed inquiry slip ▲

CHIP-TOTE

...INCREASES SCRAP HANDLING EFFICIENCY

...REDUCES OPERATING COSTS

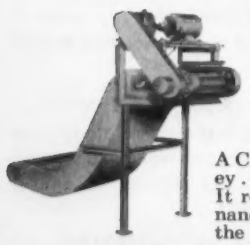
...CAN PAY FOR ITSELF IN 6 MONTHS

...PROVIDES CONTINUOUS SCRAP REMOVAL AUTOMATICALLY

8501-MF

If you are operating machine tools that are producing chips, turnings or borings in quantity . . . there is no cheaper way to dispose of the scrap than with a CHIP-TOTE!

The Chip-Tote is a pre-engineered accessory that fits virtually any type of automatic machine tool. Its speed can be synchronized with the metal removing rate. When in operation, the Chip-Tote eliminates shut-down for removal of scrap . . . and it actually places scrap into any size container for fast removal.



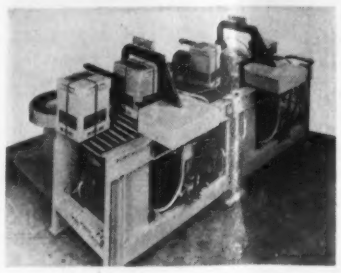
A Chip-Tote will save you money . . . now . . . and in the future. It requires little or no maintenance, and is constructed to last the life of the machine tool.

For complete information, write for Catalog No. MF-640.

MAY-FRAN ENGINEERING, INC.
1711 Clarkstone Road, Cleveland, Ohio

▲ For more details circle NED-351 F9 on enclosed inquiry slip ▲

POWER STRAPPING MACHINE
handles all container sizes, can be mounted in any position

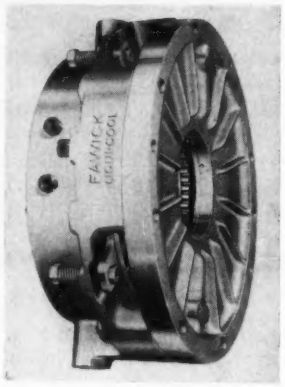


Unlimited strap chute size and strap take-up to accommodate all sizes of containers is featured by semiautomatic and automatic Series M20 power strapping machines. Strap tension, applied smoothly without impact, ranges from 50 lb to maximum tensile strength of strap. Strap feeding speed is 196 fpm.

Machine can be mounted in any position, and straps can be applied in either vertical or horizontal plane. Overlap of strap ends is only 1¼ in. Bundle or package need not be moved in relation to the machine during the strapping cycle. Cutters and sealing jaws are easily replaced. Several machines can be ganged for simultaneous application of multiple straps to a single package. Photo shows operatorless cross-strapping of nail cartons in mixed sizes. Made by **Signode Steel Strapping Co.**, 2600 N. Western Ave., Chicago 47, Ill.

▲ For more details circle NED-352 F9 on enclosed inquiry slip ▲

CLUTCHES & BRAKES
liquid cooled unit in five sizes made in single and dual disc types



Rapid heat removal from friction surfaces through copper pressure plates provides Fawick Liqui - cool clutches and brakes with high energy absorption. Cool running and high capacity characteristics suit them for applications where excessive frictional heat is developed, such as in high inertia applications and constant tension braking and continuous slip clutching.

Brakes and clutches are produced in five basic sizes in single and dual disc designs. Torque ratings for single disc units range from 4500 to 100,000 lb-in. Dual disc units have twice the capacity with the same diameter and mounting dimensions. Disc sizes range from 7¾ to 24 in.

Internal gear drive has a straight-through bore for ¾ to 10-in. diameter shafts. Units require no cool-off period between repetitive applications. They are actuated with air, hydraulic fluid, or water, and are self-adjusting. Developed in coordination with Raybestos-Manhattan Inc., and made by **Fawick Corp.**, Fawick Airflex Div., 9919 Clinton Rd., Cleveland 11, Ohio.

▲ For more details circle NED-353 F9 on enclosed inquiry slip ▲

FREE NEW-16 PAGE CATALOG
WRITE FOR YOUR COPY TODAY

JIG AND FIXTURE COMPONENTS
LATCH BOLTS
CAST IRON HAND KNOBS
ALUMINUM HAND KNOBS
QUARTER TURN SCREWS
SHOULDER SCREWS
JIG FEET (3 TYPES)
SPHERICAL WASHERS
FIXTURE KEYS
KNURLED HEAD SCREWS
TOGGLE SHOE CLAMPS & V-PADS

HOLD DOWN AND CLAMPING TOOLS
T-NUT & STUD SETS
STEP BLOCK & CLAMP SETS
FLANGED NUTS
CUT THREAD STUDS
TEE NUTS
COUPLING NUTS
ADJUSTABLE STEP BLOCKS
STRAP CLAMPS (PLAIN & STEP TYPE)

CATALOG INCLUDES TRACING TEMPLATES

Northwestern
127 HOLLIER AVE., DAYTON 3, OHIO

▲ For more details circle NED-354 F9 on enclosed inquiry slip ▲

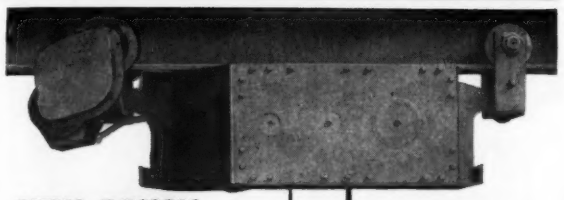
whatever you mark . . . save money, time and material with a **MARKEM METHOD**

Whether you mark materials, parts, products or packages, there's a Markem machine ready to bring low cost, high production identification or decorative marking to your plant. From plastics to fabrics . . . transistors to camera parts . . . multi-color decorative marking to high production offset marking — there's a *Markem Method* to meet your marking needs. One source, with 47 years of experience in all industries, can supply the machines, type, inks, accessories and service you need. For complete information, write Markem Machine Company, Keene 3, New Hampshire.

MARKEM

EVERYTHING INDUSTRY NEEDS . . . FOR PROFITABLE MARKING . . . SINCE 1911

▲ For more details circle NED-355 F9 on enclosed inquiry slip ▲



NEW DESIGN LOW HEADROOM HOISTS

Fraction-of-an-inch control of capacity loads from 3 to 45 tons.

New low-headroom design solves many installation problems in 3 to 7½ ton capacities . . . distance between track and eye of hook measures only 21 inches!

INCHING CONTROL — A combination of instantaneous motor torque and dual braking system provides inching control of capacity loads — 3 to 45 tons — within thousandths-of-an-inch. Plain, hand-geared or motorized trolleys available.

DUAL BRAKING — Regenerative braking built into LeTourneau electric motors automatically regulates load travel . . . has no wearing parts, needs no adjustment. Powerful electro-mechanical brakes stop and hold capacity loads, prevent overtravel.

If you need to move big loads in closely defined limits, write for full information on LeTourneau "Big Lift" Hoists.

R.G. LETOURNEAU INC
2566 South MacArthur Longview, Texas

F-119 R

▲ For more details circle NED-356 F9 on enclosed inquiry slip ▲

SAW HOLES
Through Sheet or Plate!

No. 1 Hole Saw Kit
LIST PRICE
$62.80
F.O.B. Chicago
Shipping Weight 10 Lbs.

With a MARVEL No. 1 Hole Saw Kit, you can save time and labor by sawing holes from ¾" to 2½" diameter in sheet or plate, using an ordinary portable electric drill or a drill press. Saws to cut holes from 9/16" up to 6" dia. are available. MARVEL High-Speed-Edge Hole Saws are heavy duty tools, having a cutting edge of high speed steel welded to a tough alloy steel body to insure fast cutting and long service life. Arbors are heat treated, rugged, and practically indestructible. No. 1 Kit is complete with ¾", ⅞", 1⅛", 1⅜", 1½", 1¾", 2", 2¼", 2½" Saws with necessary Arbors. See your MARVEL Distributor, or write for Hole Saw Bulletin HS-475.

ARMSTRONG BLUM MFG. CO.
5700 W. Bloomingdale Avenue • Chicago 39, Illinois

▲ For more details circle NED-357 F9 on enclosed inquiry slip ▲

EIGHT PRODUCTION ADVANTAGES
standard at no extra cost

- 6, 8 or 12 station indexing
- Carries heavier leads at higher speeds
- Dependable gear motor drive
- Hollow drive spindle . . . for pipe or conduit
- Sealed drive unit housing
- Anti-friction bearings throughout
- Accurate . . . .002" indexing tolerance
- Completely J.I.C. . . . simplified maintenance

► **HERE IT IS** . . . built for a buyer's market . . . with eight exclusive features, standard, at no extra cost. More operational advantages, less maintenance worries, more for the money. The H-P-M C-Press is available in manual and automatic models, a variety of operating controls and accessories to make it adaptable to many different production jobs. Hydraulic index table model illustrated. Send for complete catalog.

THE HYDRAULIC PRESS MFG. COMPANY
A Division of Koehring Company • Mount Gilead, Ohio, U.S.A. H903

▲ For more details circle **NED-358 F9** on enclosed inquiry slip ▲

Available NOW for the FIRST TIME

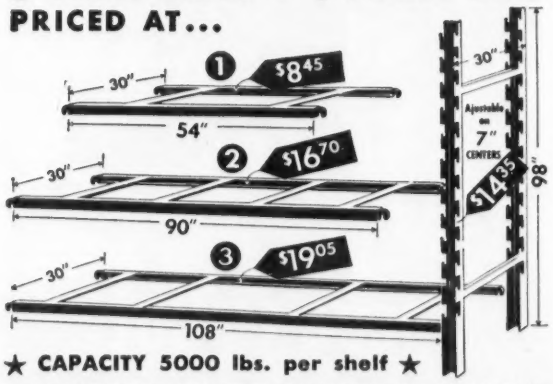
DEPENDABLE P-S MATERIALS HANDLING EQUIPMENT

STANDARD SIZE PALMER-SHILE Adjustable STORAGE RACKS

SERIES 60 Pat. App. For

JUST TWO STEPS—SET UP PANELS SNAP SHELVES IN POSITION

3 SHELF SIZES • 1 PANEL SIZE PRICED AT...



★ **CAPACITY 5000 lbs. per shelf** ★

IMMEDIATE DELIVERY FROM STOCK OF LOW COST P-S Standard Series 60 Racks are ideal where fast action is necessary to solve your storage problem. Built of sturdy steel channel they are capable of handling almost any kind of materials and merchandise on pallets, skids, boxes or barrels. Come in four pieces—A. Vertical PANEL 8½' high, 30" deep and 2½" wide with shelves adjustable to 7" centers. B. THREE DIFFERENT SHELF LENGTHS 4½', 7½' and 9' each 30" deep. No small parts, set entirely by hand, top shelf can be flush. Standard racks can be joined in multiple sections of the same shelving lengths, or any combination.

Can be built to customer specifications

DESIGNED AND MANUFACTURED BY
Palmer-Shile Co.
16015 FULLERTON AVE., DETROIT 27, MICH.

BOSTON, Mass., ANdrew 8-3634 • BURLINGAME, Calif., Diamond 2-0823 CHICAGO, Ill., AUstin 7-8599 • DENVER, Colo., ATlas 7-5255 • EUCLID, Ohio, IVanhoe 6-3150 • FLINT, Michigan, CEdar 6-6881 • FORT WAYNE, Indiana, KEnmore 5408 • INDIANAPOLIS, Indiana, MElrose 5-2587 • LOS ANGELES, Calif., RAymond 3-3733 • MILWAUKEE, Wis., BRoadway 1-9860 ST. LOUIS, Mo., PRospect 1-1474 • WHITE PLAINS, N. Y., White Plains 6-1354. Export Division—75 West St., NEW YORK 6, N. Y.

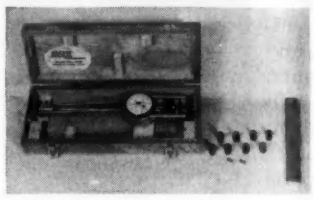
▲ For more details circle **NED-359 F9** on enclosed inquiry slip ▲

RETAINING RING TOOLS
combine applicator and dispenser

Several types of Truarc retaining rings can be installed with Ring-Gun and Ring-Jector, illustrated, assembly tools which accommodate Rol-Pak stacked rings. Ring-Gun is shaped like an oversize Luger pistol and the Ring-Jector resembles a hand stapler in appearance. Both tools are compact, offer fast ring assembly and mobility, and facilitate application of rings used to lock components under spring pressure. Ring-Gun handles nine rings of several types for shafts with 0.156 to 3.75-in. diameters. Ring-Jector applies seven sizes to 0.125 to 0.250-in. diameter shafts. Made by **Waldes Kohinoor, Inc.**, 47-16 Austel Place, Long Island City 1, N. Y.

▲ For more details circle **NED-360 F9** on enclosed inquiry slip ▲

STRAIN GAGE
has five master settings



Strain and length changes in steel, wood, masonry, brick, concrete, cement, and similar materials can be measured by this multiposition strain gage. Five different master settings range from 2 to 10 in. Dial indicator has a minimum graduation of 0.0001 in. and a range of 0.2000 in. at any of the master settings. Frame is aluminum alloy. Made by **Soiltest, Inc.**, 4711 W. North Ave., Chicago 39, Ill.

▲ For more details circle **NED-361 F9** on enclosed inquiry slip ▲

CURVE FOLLOWER
traces pencil-drawn graphs

Process control or computer programming instructions fed into this Data-Trak curve follower in the form of double pencil-drawn curves on graph paper are translated into proportional electrical signals. Applications for the self-contained, 115-v 60-cycle unit are expected in the automation of industrial processes, including regulation of temperature, pressure, speed, and position. Three-channel function generator shown can simultaneously read three charts mounted on separate revolving drums. A stylus under each drum is continuously servo driven to a null position midway between the two pencil lines that define the plotted function. Stylus never contacts paper. Made by **Research, Inc.**, 115 N. Buchanan, Hopkins, Minn.

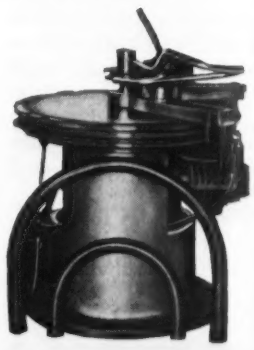
▲ For more details circle **NED-362 F9** on enclosed inquiry slip ▲

tricky

BENDS ARE EASY WITH PEDRICK BENDERS

Complicated pipe, tube or structural metal bends are a cinch with Pedrick Production Benders—on either a production or job basis.

Show us your problem—with drawings, if possible—and we'll show you the answer. Write PEDRICK TOOL AND MACHINE Co., 3640 N. Lawrence St., Phila. 40, Pa. Dept. 6.

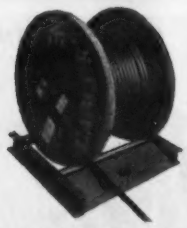


FREE "PEDRICK LINE" BULLETIN. WRITE TODAY.

PEDRICK production benders

▲ For more details circle **NED-363 F9** on enclosed inquiry slip ▲

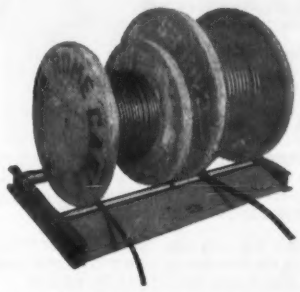
LOAD 'EM . . . LET 'EM ROLL HANDLE REELS THE *EASY* WAY!



Easy, simple, efficient, time and labor-saving. Just load cable, wire or rope reels on Roll-A-Reel and let 'em roll on the ball-bearing adjustable rollers, on heavy steel frame.

Style "A" 2,000 lbs. cap. for reels up to 28 in. wide. (weight 60#)

PRICE — $46.50
F. O. B. Cincinnati



- ★ No jacks
- ★ Handle any reel diameter
- ★ Heavy steel frame
- ★ Slanted front
- ★ Ball-bearing adjustable rollers
- ★ Positive roller lock for unloading

Style "B" 4,000 lbs. cap. for 2 reels up to 24 in. wide each, or 1 reel up to 48 in. wide. (weight 110#)

PRICE — $84.50
F. O. B. Cincinnati

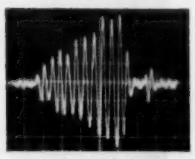
(Special sizes quoted on request)
Order today...or write for details

ROLL•A•REEL 4630 Reading Road Cincinnati 29, Ohio

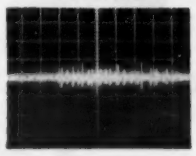
▲ For more details circle **NED-364 F9** on enclosed inquiry slip ▲

CUT MACHINE NOISE

Low-cost Isomode® Pads... cut vibration from this



to this

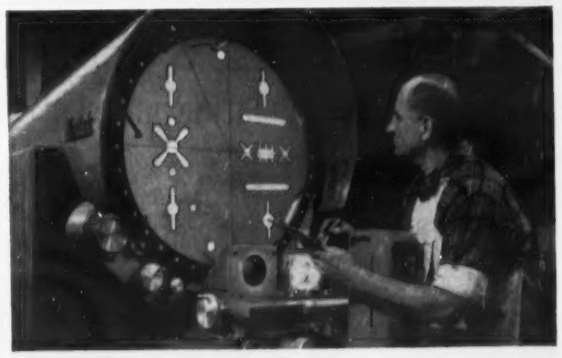


MB Isomode Pads made this difference in noise-creating vibration for less than $1.50 per ton of machinery. Compare floor vibration at bolted-down punch press (top), and vibration with bolt removed, Isomode Pad under foot.

Isomode Pads, made of oil- and water-resistant DuPont neoprene, can make the same difference in *your* plant. Simply cut section from pad—slide it under machine foot. That does it. Pads absorb shock and shake . . . reduce floor and machine damage . . . eliminate hold-down bolts . . . slash noise levels. See for yourself. Order trial carton of ten 18"x18" pads, or send for informative bulletin.

MB MANUFACTURING COMPANY
A DIVISION OF TEXTRON INC., 1066 State St., New Haven 11, Conn.

▲ For more details circle **NED-365 F9** on enclosed inquiry slip ▲



ONE instrument inspects them all...
angles, radii, holes, surfaces

Optical gaging with the Kodak Contour Projector gives you fast, accurate, economical inspection for practically any tool you use or component you make or buy.

Inspection can be done at a glance using the magnified projected image and a chart gage. No buying of many gages. No damage to delicate parts. Precise enough even for the finest tools or tiny parts.

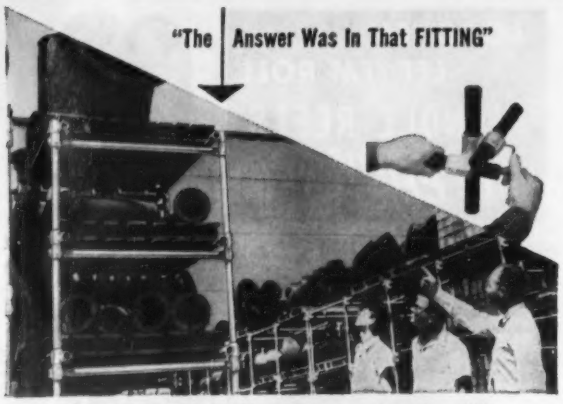
There are six different Kodak Contour Projectors, one matched to your needs. Get all the facts by writing to:

Special Products Sales
EASTMAN KODAK COMPANY, Rochester 4, N. Y.

the KODAK CONTOUR PROJECTOR

Kodak TRADEMARK

▲ For more details circle **NED-366 F9** on enclosed inquiry slip ▲



Another storage problem solved at a saving with

NU-RAIL SLIP-ON FITTINGS

• no threading • no welding
no clamps, no washers, no nuts to assemble.

The simplest way to build the strongest materials storage racks, indoors or outdoors, is with NU-RAIL Slip-On Fittings or the lighter-duty SPEED-RAIL Fittings. These are the original slip-on fittings and comprise the only truly complete line of fittings for building structures with standard I.P.S. pipe.

The method of assembly is so simple that only pipe-cutting tools and hex wrenches are required. Right there is the time-saving feature that commonly means an overall saving of 30% for pipe structures built with NU-RAIL or SPEED-RAIL Fittings.

For heavy materials storage there's an ample 100% safety factor; for changing storage conditions there's the 100% salvageability of pipe and fittings. Need more information? Write for Bulletin 22-E.

THE HOLLAENDER MANUFACTURING CO. 3841 Spring Grove Avenue Cincinnati 23 Ohio

▲ For more details circle **NED-367 F9** on enclosed inquiry slip ▲

Multiform

BIG BROTHER BENDER

Illustrated above are a few of the many forms that can be produced efficiently on the Multiform Bender.

Model BBB

SMALLER MODELS AVAILABLE

AIR OPERATED MODELS IN FOUR SIZES
HYDRAULIC—3 MODELS

The heavy duty Big Brother Bender is designed for fabricating bus bars, brackets, fixtures, etc., without special tooling. Air controlled with finger tip response. Comes complete with dies, mandrels and wrenches—punching and blanking dies extra. Will punch holes up to 1" and form material up to 1/4" thick by 4" wide. We also build smaller models, hand or air operated, for bending materials up to 1/8" x 1 1/2".

Send for illustrated folder M6

J. A. RICHARDS CO. Myrtle & Pitcher Sts. Kalamazoo, Mich.

▲ For more details circle **NED-368 F9** on enclosed inquiry slip ▲

Water treatment— a serious engineering problem

FREE BOOKLET

gives practical answers

Scale deposits and slimes can wreak havoc with air-conditioning and refrigeration systems and with boilers and heating systems. It is a condition all maintenance engineers know and fight. But not everyone can tell you how to *cure* water problems. And not all water treatment chemicals can combat the conditions successfully. "Virginia" can do both. Our chemicals are economical, easy to use—and sold by wholesalers everywhere. A letter, wire, or phone call can bring a "Virginia" man—skilled in every phase of water treatment—to you with the right answers.

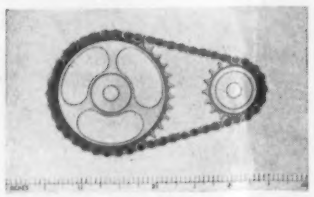
VIRGINIA SMELTING COMPANY
135 Jefferson St., West Norfolk, Va.

☐ Send me a copy of your free booklet, "Water Cooling Problems—How to Correct Them"
☐ Send a "Virginia" field man around to see me

Name _____ Title _____
Company _____
Address _____

▲ For more details circle **NED-369 F9** on enclosed inquiry slip ▲

DRIVE CHAIN
small size made of stainless steel



High strength and high resistance to joint wear are combined with minimum size and weight in Micropitch standard bushing chain. It has a pitch of 0.1475 in., width of 0.210 in., and weighs about 1/2 oz per foot. Material is nonmagnetic Grade 18-8 stainless steel. Chain will permit an infinite variety of shaft centers and multiple shafts can be accurately timed as sprockets may engage either or both sides. Sprockets and special attachments can be made to specifications. Applications include electromechanical equipment, instruments, data processing machines, and tape recorders. Made by **Diamond Chain Co.**, 402 Kentucky Ave., Indianapolis 7, Ind.

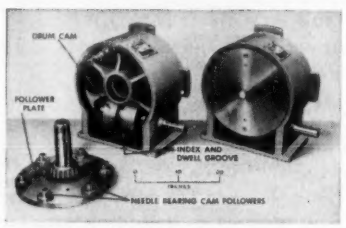
▲ For more details circle **NED-370 F9** on enclosed inquiry slip ▲

PARTS CLEANING KIT
solvent cleans without agitation

Consisting of handy 1 1/2-gal immersion container, re-usable metal parts basket, and 1 gal of Cold Parts Cleaner, this parts cleaning unit will remove baked - on carbon, varnish, grease, and other deposits from metal parts without heat or agitation. Basket holds parts and facilitates immersion, removal, and draining. Rinsing can be in solvent, kerosine, or water. A water seal prevents evaporation of the cleaning fluid. Made by **Permatex Co., Inc.**, 300 Broadway, Huntington, N. Y.

▲ For more details circle **NED-371 F9** on enclosed inquiry slip ▲

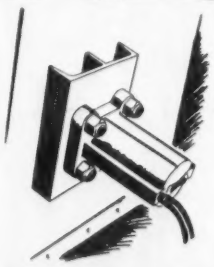
CAM INDEX DRIVES
for trunnion and dial type tables



Uniform acceleration and deceleration of both trunnion and dial type index tables on automated machines and special machine tools are provided by line of Expert standard cam index drives. They index smoothly and without shock to within ±0.003 in. at the outside edge of a 36-in. diameter table. Addition of a mechanical shot pin mechanism increases accuracy. Three standard drives are available for 20 to 100-in. diameter tables. Each size can be obtained with 4, 5, 6, 7, 8, 10, 12, or 16 indexes per table revolution. Made by **Expert Automation Machine Co.**, 17144 Mt. Elliott Ave., Detroit 12, Mich.

▲ For more details circle **NED-372 F9** on enclosed inquiry slip ▲

Shake Loose those bin problems with a CLEVELAND VIBRATOR



Maintain a regulated flow from your bins. Cleveland Vibrators eliminate plugging and jamming. Low in cost and easy to install, there is no bin damage and no wasted man hours.

Write today for literature on air and electrically operated vibrators.

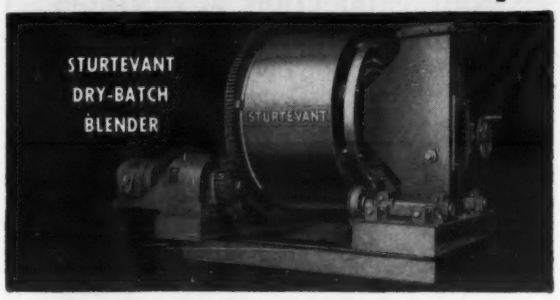
Bin Stuck Lately?

THE CLEVELAND VIBRATOR CO.

Dept. 6K-2744 Clinton Ave. • Cleveland 13, Ohio
See our advertisement in the Chemical Engineering Catalog

▲ For more details circle **NED-373 F9** on enclosed inquiry slip ▲

BLENDING COSTS cut 2 ways!



1. PRODUCTION SPEEDED UP BY 4-WAY MIXING
2. SHUT-DOWNS SHORTENED BY "OPEN-DOOR" DESIGN

Batches from 500 to 40,000 pounds are completely blended regardless of varying weights, densities or fineness of different ingredients. No dust loss!

Four different vertical and lateral mixing actions do the job in minimum time. Single lever control of single gate speeds loading and discharging.

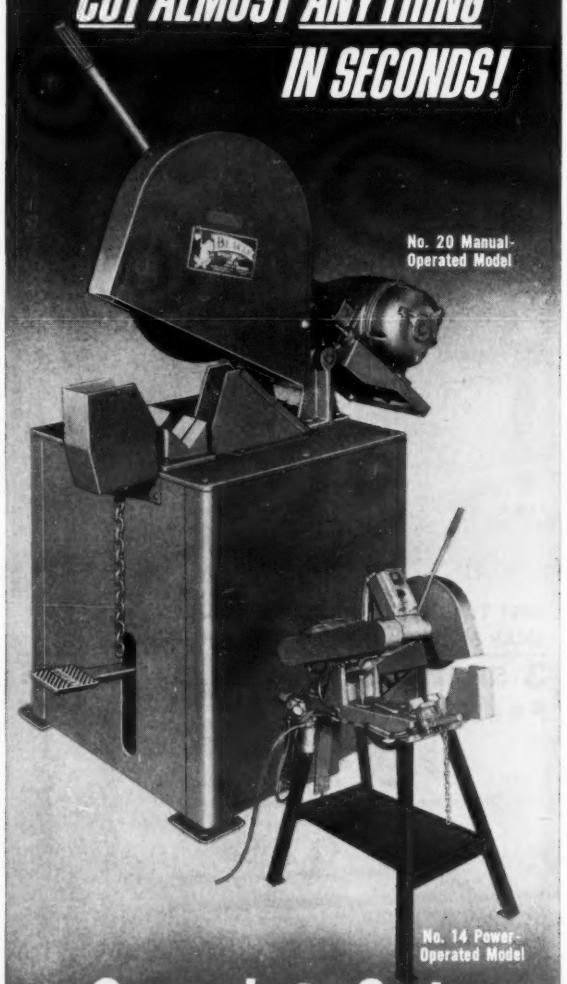
"Open-Door" accessibility for quick, easy cleaning and maintenance *plus* 75-year-tested rugged construction add up to more output per machine-year.

Write for Bulletins on Sturtevant Batch Blenders and other custom-built equipment listed below. STURTEVANT MILL CO., 114 CLAYTON ST., BOSTON 22, MASS.

STURTEVANT
Dry Processing Equipment
The "OPEN-DOOR" to *lower* operating costs over *more* years
CRUSHERS • GRINDERS • MICRON-GRINDERS • SEPARATORS
BLENDERS • GRANULATORS • CONVEYORS • ELEVATORS

▲ For more details circle **NED-374 F9** on enclosed inquiry slip ▲

CUT TIME! CUT COSTS!
CUT ALMOST ANYTHING IN SECONDS!



Speed Cut
Abrasive Cutting Machines
MANUAL OR POWER-OPERATED MODELS FOR WET, DRY OR ANY-ANGLE CUTTING!

Speed Cut — *Send for complete catalog and name of nearest distributor*

ABRASIVE MACHINE DIV.
BEAVER PIPE TOOLS, INC.
DANA AVE.
WARREN, OHIO

▲ For more details circle **NED-375 F9** on enclosed inquiry slip ▲

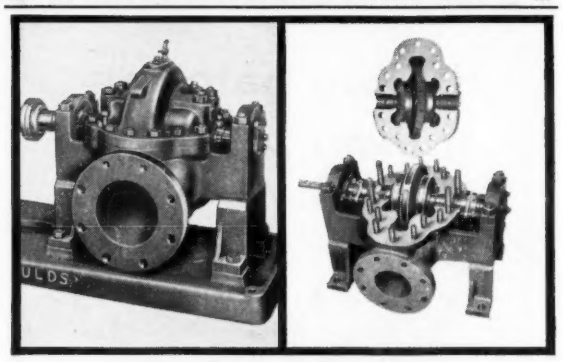
POR-ROK

1. Fastens anything into concrete—PERMANENTLY—in minutes
2. Lowest cost
3. Mixed with water and poured into place
4. Applied cold
5. Self-leveling, self-bonding, oil resistant, never shrinks
6. Compression strength 4,500 psi in 1 hour

For complete information—without obligation—write

THE HALLEMITE MFG. CO.
2452 WEST 25th ST. • CLEVELAND 13, OHIO SINCE 1927

▲ For more details circle **NED-376 F9** on enclosed inquiry slip ▲



Goulds Fig. 3405 Centrifugal Pump

HORIZONTALLY SPLIT CASING CUTS INSPECTION AND MAINTENANCE TIME

Just remove the bolts and lift the upper half of the casing! That's all there is to going *inside* this Goulds Fig. 3405 Centrifugal Pump.

You don't disturb piping.

You don't disturb pump and driver alignment.

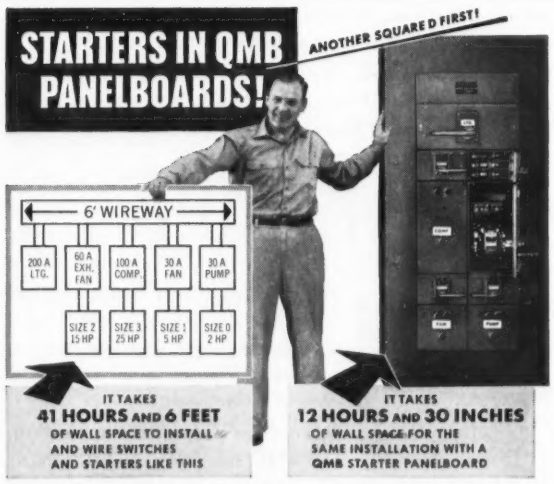
You *do* save time whenever you must inspect, maintain, or make adjustments inside the 3405.

Just 3 groups of parts fit all 33 sizes of this pump. All parts are interchangeable within a group (small-, medium- and large-size groups) except casings, casing covers and impellers.

Capacities from 200 to 6400 GPM; heads up to 425 feet. You can change rotation *in the field* for 66 possible combinations. Write for all the details. Goulds Pumps, Inc., Dept. NED-69, Seneca Falls, N.Y.

GOULDS PUMPS

▲ For more details circle **NED-377 F9** on enclosed inquiry slip ▲



• Why mount separate starters and disconnect switches? It costs extra money. It wastes space. It takes a lot more time. QMB panelboards accommodate reversing and non-reversing starters, sizes 0 through 3. QMB switchboards and unit substations handle sizes 0 through 5. All are available factory-assembled and wired. Or get separate enclosures, starters, and plug-in switch units from your Square D distributor.

Write for Bulletin SD80 to Square D Company, 6060 Rivard Street, Detroit 11, Michigan

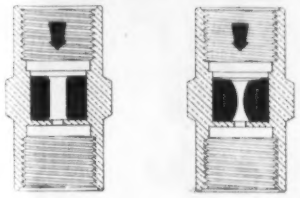
NOW... EC&M PRODUCTS ARE A PART OF THE SQUARE D LINE

SQUARE D COMPANY

▲ For more details circle **NED-378 F9** on enclosed inquiry slip ▲

FLOW REGULATORS
eight sizes for 2 to 8 gpm

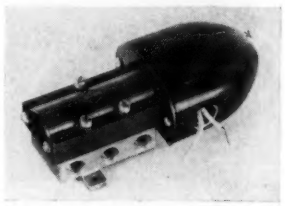
Flow control in this line of regulators is obtained by a change in size and shape of the orifice as shown. At left, the flexible rubber member (in black) is under minimum inlet pressure, while at right it has partly closed the orifice under high inlet pressure. The orifice is self-cleaning by its continual flexing. Bodies of the units are brass, tapped for ½ in. for capacities from 2 to 4 gpm and ¾ in. for sizes to 8 gpm. Eight sizes are offered. They are accurate to ±10 per cent of rated size when used with 20 to 125 psi and temperatures to 160° F. Made by **Taco Heaters, Inc.**, 1160 Cranston St., Cranston 9, R. I.



Flow Control Under Minimum Inlet Pressure — Flow Control Under High Inlet Pressure

▲ For more details circle **NED-379 F9** on enclosed inquiry slip ▲

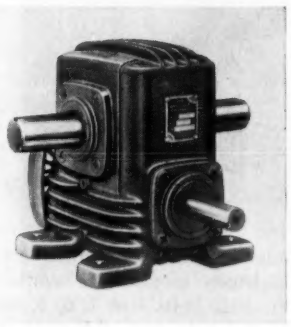
¼-IN. FOUR-WAY VALVE
for air or hydraulic service



Rated for 200-psi vacuum or pressure service, the Model A four-way valve has tolerances of 0.000050 in. for good sealing characteristics. All working surfaces in the ¼-in. sub-base mounted unit have a hardness equal to that of tungsten carbide. All ports are unrestricted full pipe area passages. Hand, foot, pilot, cam, solenoid, and bleeder type actuations are offered. The single solenoid valve lists for only $34.50. Made by **Alkon Products Corp.**, 200 Central Ave., Hawthorne, N. J.

▲ For more details circle **NED-380 F9** on enclosed inquiry slip ▲

SPEED REDUCERS
finned type also has cooling fan



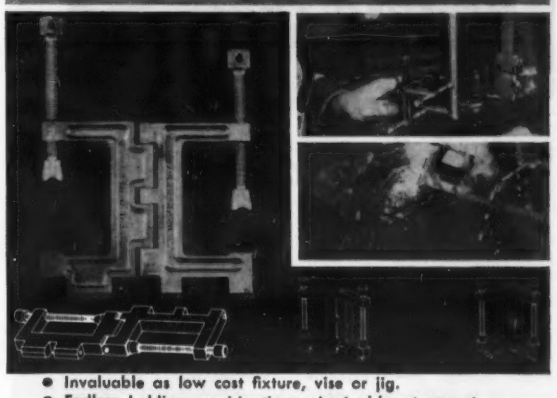
External cooling fins, plus a powered cooling fan, featured in Hi-Line speed reducers, provide 80 per cent more capacity than comparable nonventilated reducers. Units have heavy duty worm and gear reduction, heavy capacity bearings, and short distance between worm and gear. Horizontal, right-angle Model S shown is available with output shaft above or below center. Sizes range from 1.33 to 5.25-in. center distance. Made by **Ohio Gear Co.**, 1333 E. 179th St., Cleveland 10, Ohio.

▲ For more details circle **NED-381 F9** on enclosed inquiry slip ▲

SQUARE D COMPANY

▲ For more details circle **NED-382 F9** on enclosed inquiry slip ▲

A Holding Problem?
. . . MERRILL THIRD HAND CLAMPS Have The Right Angle For It!

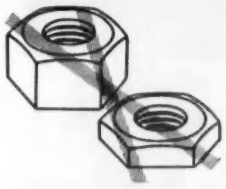


- Invaluable as low cost fixture, vise or jig.
- Endless holding combinations obtainable at preset angles of 45°, 90° and 180°.
- Assembles in minutes for most complicated setups.
- Indispensable in any operation such as welding, fastening and machining.
- Costs no more than high quality forged "C" Clamps, yet offers many more advantages.
- Available in 2" and 4" sizes.

U-27 For complete information, ask for Catalog TH

MERRILL BROTHERS
56-62 Arnold Ave., Maspeth, N. Y.

▲ For more details circle **NED-383 F9** on enclosed inquiry slip ▲



Save 65¢ on each Fastener Dollar!

Replace expensive, heavy nuts and jam nuts with low-cost, vibration-proof

PALNUT® TYPE R LOCK NUTS

On many applications, Type R PALNUT Lock Nuts will do the job better, at 1/3 the price. PALNUT spring tempered steel lock nuts provide rugged assembly for loads in shear and moderate tensile loads, in sizes up to 2 1/2" diameter.

In addition, you get vibration-proof assemblies—eliminate lock-washers—need only 3 bolt threads space—save from 65 to 80% fastener weight. PALNUTS provide precision thread fits—assemble fast with hand or power tools. Range of sizes from #3-48 machine screw through 2 1/2" American Standard Heavy.

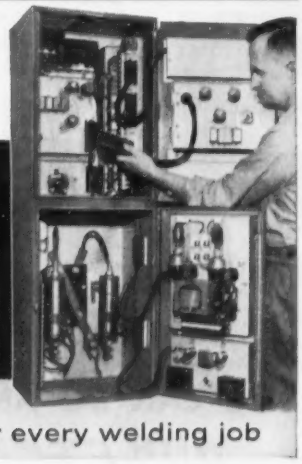
Write for literature, specifications, and prices. State application and size for free samples.

THE PALNUT COMPANY, 45 Glen Road, Mountainside, N. J.
In Canada: P. L. Robertson Co., Ltd., Milton, Ont.

PALNUT® LOCK NUTS FASTENERS
Quick, secure fastening at low cost

▲ For more details circle **NED-384 F9** on enclosed inquiry slip ▲

New PLUG-IN Welder Control Lets You ADD CONTROL FUNCTIONS AS YOU NEED THEM!



Every Feature You Want--for every welding job

This new plug-in control can be "customized" to meet any welding requirement. You start with the basic control system for all standard jobs, just add plug-in units as you need them for special jobs. Your choice of "relay firing" or "all electronic" versions.

Write for Bulletin SM-277 to Square D Company, 4041 N. Richards St., Milwaukee 12, Wis.

NOW... EC&M PRODUCTS ARE A PART OF THE SQUARE D LINE

SQUARE D COMPANY

▲ For more details circle **NED-385 F9** on enclosed inquiry slip ▲

Only TONG TEST measures both AC and DC

Says: A. P. Drda, Master Electrician Midland-Ross Corp.

Balance loads, check welding current, avoid shutdowns, reduce repair costs. TONG TEST AMMETERS measure both alternating and direct current. No electrical connections required, simply press trigger and snap tongs around electrical conductor for instant readings. Interchangeable ranges up to 1000 amperes; impossible to read the wrong scale.

Rugged and dependable, safe and accurate. No coils or wires to burn out. Eight types of TONG TEST available for conductors up to 3⅞" diameter or bus bars up to 4½" x ½".

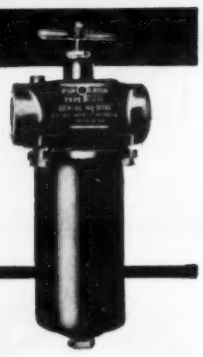
Write for Catalog ND-400

COLUMBIA ELECTRIC MFG. CO.
4525 Hamilton Ave.
CLEVELAND 14, OHIO

For more details circle NED-386 F9 on enclosed inquiry slip

filter tips on processing

- SLURRIES
- OILS and GREASES
- CORROSIVE LIQUIDS
- PAINTS
- GOOEY PRODUCTS



Here's why the Purolator G-140 series is ideal for viscous and corrosive liquids:

- The models in this series are heavy-duty industrial filters. They feature the Purolator Metal Edge, in which the filter element consists of precisely spaced metal ribbon wound into cylinder form. Uniform projections along the flat side determine the degree of filtration.
- These filters can be installed on either the pressure or suction side of the pump.
- Manual or motorized cleaning is a standard feature.
- Stainless steel models will handle corrosive liquids and special process fluids to meet Pure Food and Drug requirements.

Send for details and data, or write us the particulars of your problem. We'll be glad to help. Write Dept. P10-67.

Filtration For Every Known Fluid

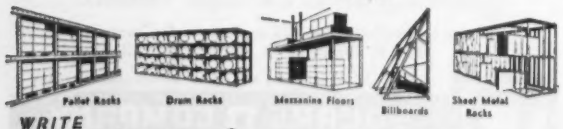
PUROLATOR PRODUCTS, INC.
RAHWAY, NEW JERSEY AND TORONTO, ONTARIO, CANADA

For more details circle NED-387 F9 on enclosed inquiry slip

YOU CAN DO ANYTHING... WITH FLEXANGLE

You'll solve problems that look impossible...with FlexAngle.

- No drilling, welding, painting
- No special training needed
- Cut every ¾" with exact fits
- No waste
- No expensive accessories
- Lay out, measure, cut, bolt on spot

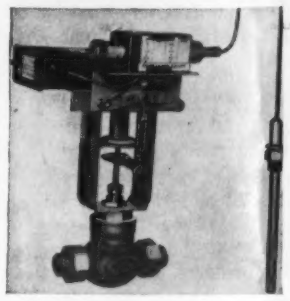


WRITE FOR FREE BULLETIN

FLEXANGLE CORPORATION
3762 OAKWOOD AVE. • P. O. BOX 418 • YOUNGSTOWN 1, OHIO

For more details circle NED-388 F9 on enclosed inquiry slip

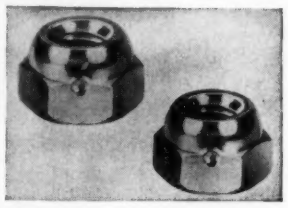
PROCESS CONTROL monitors temperatures or pressures



Precise control of process temperatures and pressures is provided by this Fulto - Lectric controller-positioner-valve combination. This electrically operated modulating instrument for controlling processes is a packaged unit. Any change in the measured variable actuates a reversible motor to properly position the valve. Advantages reported are small sensing bulb, high rate of response, adjustable proportional band, positive valve positioning, easy installation, and 1-in. stem travel. Made by **Robertshaw-Fulton Controls Co.**, Fulton Sylphon Div., Box 400, Knoxville 1, Tenn.

For more details circle NED-389 F9 on enclosed inquiry slip

LOCK NUTS have open end acorn design



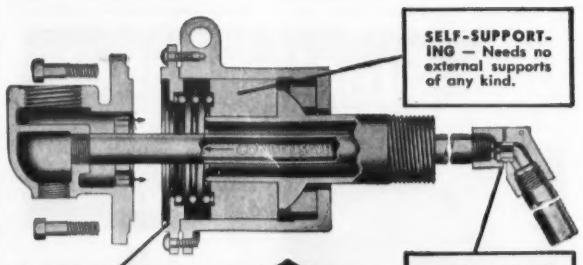
Two stakings in the sides of these open end acorn-type lock nuts distort the threads slightly to lock the nut to the screw by prevailing torque. Applications include metal furniture, appliances, toys, small carts, stools, and similar products where rounded contours are desirable. Both steel and aluminum nuts are produced in No. 10, ¼ and 5/16-in. sizes. Made by **Russell, Burdsall & Ward Bolt & Nut Co.**, 100 Midland Ave., Port Chester, N. Y.

For more details circle NED-390 F9 on enclosed inquiry slip

MACHINE-SIDE CONVEYORS fit easily into cramped areas

Only 4½ in. wider than the conveyor belt itself, Economy line of machine-side conveyors easily fits into restricted areas between machines and production lines. Portable units transport castings, stampings, blanks, screw machine parts, and scrap to another machine or tote box at any incline angle from 22 to 45 degrees. Eighteen models are available with 6, 12, 18, or 24-in. wide belts and 4, 6, 8, 10, and 12-ft lengths. Choice of integral 1-in. rubber cleats, bolted-on metal cleats, or an all metal belt for high temperatures is offered. Adjustable loading chute and a mechanical backstop prevent parts from sliding off the belt. Made by **Bosworth Mfg. Co.**, 34250 Mills Rd., Avon, Ohio.

For more details circle NED-391 F9 on enclosed inquiry slip



Johnson Rotary Joint with SYPHON ELBOW

Johnson Joints represent the best way industry has yet found to get steam or liquids into rotating rolls and cylinders. They are completely packless, need no lubrication or adjustment. The Type SBP shown gets steam in, condensate out, through the same head. Other types available for through flow service, in sizes to meet all operating needs. WRITE FOR COMPLETE INFORMATION.

The Johnson Corporation
812 Wood St., Three Rivers, Mich.

For more details circle NED-392 F9 on enclosed inquiry slip

From PRECISION GEARS To ACCURATE SPEED REDUCERS
Abart Meets Any Industrial Need

GEARS—any type . . . any material . . . custom cut to specifications. Send B/P or specs for sample. Request bulletin.

SPEED REDUCERS
Over 75 types and sizes . . . fractional to over 400 hp., ratios to 10,000 to 1. Ask for information packed catalog.

Prompt Quotations • Quick Delivery • Write Today!

ABART GEAR and MACHINE CO.
4831 WEST 16th STREET • CHICAGO 50, ILLINOIS

For more details circle NED-393 F9 on enclosed inquiry slip

Mix big batches of fluids in a jiffy

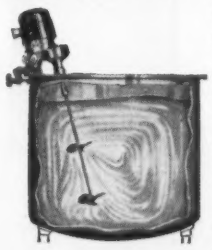
Suspend heavy solids—no job too tough for these rugged mixers

Yes, you can mix batches as big as this 6000-pound vat of clay slurry—and still get *portable* mixer convenience!

Get swift uniformity with LIGHTNIN Portables—at the flip of a switch. Powerful propeller stream sweeps the tank bottom, suspends solids, *tumbles* and *rotates* the batch violently—or gently—as you prefer.

Results guaranteed. You take no risk when you specify LIGHTNIN Portables. Results are unconditionally guaranteed. Thousands of LIGHTNINs are in use; many 25 years and more.

You get widest choice of ball-bearing motors. Quickly removable true-running shaft cannot loosen or jam. Mixer locks instantly in any position. Thirty portable models to choose from, electric or air driven; direct or gear drive; sizes ⅛ to 3 HP. For full details, request 28-page illustrated Catalog B-108.



GET FAST, THOROUGH MIX in any open tank or container. No swirl, no vortex, no dead spots with LIGHTNIN double-action mixing.

Mixers for permanent mounting, too—full selection of LIGHTNINs for tanks to 6 million gallons. Sizes ¼ to 500 HP. For details, request illustrated Catalog B-109.

Lightnin® Mixers
MIXCO fluid mixing specialists

MIXING EQUIPMENT Co., Inc.
165-f Mt. Read Blvd., Rochester 3, N.Y.
In Canada: Greey Mixing Equipment, Ltd., 100 Miranda Ave., Toronto 19, Ont.

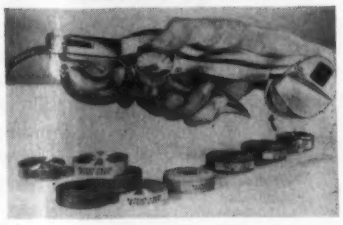
For more details circle NED-394 F9 on enclosed inquiry slip

This informative guide will help solve your problems—the problems involved in installing machinery, controlling vibration, shock and noise. Every plant engineer should have a copy of this profusely illustrated guide.
Write for your copy today.
Ask for Bulletin 35.

THE KORFUND CO., INC.
KORFUND VIBRATION CONTROL — SPRINGS — RUBBER — CORK
48-19H Thirty Second Place, Long Island City 1, N. Y.
In Canada: 510 Canal Bank, Ville St. Pierre, Montreal

▲ For more details circle NED-395 F9 on enclosed inquiry slip ▲

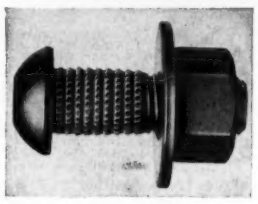
LABEL EMBOSSER
marks self-sticking label tape



Self-sticking, ½-in. wide labeling tapes of plastic, aluminum, Monel, copper, or stainless steel can be embossed right on the job with the 26-oz Dymo-Mite hand embossing machine. Tape roll, held in magazine handle, is fed between lettered, dial-type embossing dies. Dial is revolved to desired letters, and handle is squeezed for each letter. Embossed length of tape is cut off with built-in cutoff blade. Device sells for $34.95. A heavy-duty model, with built-in hole punch attachment is offered at $47 for use on heavier Monel and stainless steel tapes. Made by Dymo Corp., 2546 Tenth St., Berkeley 10, Calif.

▲ For more details circle NED-398 F9 on enclosed inquiry slip ▲

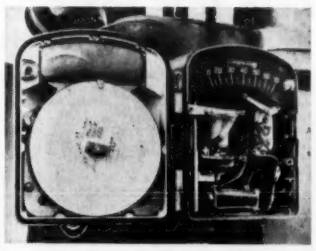
HIGH STRENGTH BOLT
has spiral knurled shank



Strength of a hex head high tensile bolt is combined with the bearing area of a rivet in this structural bolt. Specially formed knurls on the shank are set on a spiral to reduce driving load. When bolt is driven or pulled into place, the knurls produce a body-bound fit. Head washers are not necessary. Bolts are made of heat-treated high carbon steel by **Lamson & Sessions Co.**, 5000 Tiedeman Rd., Cleveland 9, Ohio.

▲ For more details circle NED-399 F9 on enclosed inquiry slip ▲

OPERATIONS RECORDER
measures truck distances and loads



Marked increases in use-efficiency are realized by mounting the Truck-O-Meter on lift trucks or other industrial materials handling equipment. The mechanical recording instrument measures distances traveled and loads handled, synchronizing these records with the time of day on a circular chart. Instrument combines a time clock, odometer, and a pressure controlled mechanism meter that records vertical lifts and drops. Application can be to trucks, cranes, and elevators of all types; bucket type loaders; tractor shovels; and earthmoving equipment. Developed by Tube Turns Div. of Chemetron Corp. and available from **Institute of Modern Management, Inc.**, 1115 S. Fourth, Louisville, Ky.

▲ For more details circle NED-400 F9 on enclosed inquiry slip ▲

▲ For more details circle NED-396 F9 on enclosed inquiry slip ▲

FROM DENISON *a small hydraulic press so productive it...*

GUARANTEES YOUR SAVINGS

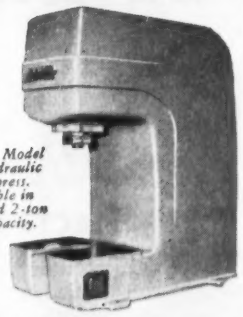
If in 45 days the Denison Model "A" Multipress does not cut your production costs or does not improve production quality, simplify operation or give your shop more versatility—simply return the press.

Multipress is ideal for assembly, forming, staking—and 101 other jobs. No cost or obligation to try it out now, in your own plant.

One-Ton Model, $395 • Two-Ton Model, $595

- High-speed cycle time
- Foolproof safety controls
- Manual or automatic operation
- Compact...24" high
- Lightweight...225 pounds
- 8" daylight for tooling
- Simple pressure adjustment
- Controlled hydraulic ram pressure

YOU PAY FOR ONLY THE FREIGHT



Denison Model "A" hydraulic Multipress. Available in 1-ton and 2-ton ram capacity.

Write for your copy of the detailed bulletin

DENISON ENGINEERING DIVISION
American Brake Shoe Co.
1192 Dublin Road • Columbus 16, Ohio
Denison Stocking Branch Offices: LOS ANGELES • DETROIT • HOUSTON CLEVELAND • ATLANTA • CHICAGO • NEWARK • DAYTON

Denison, Denison HydrOILics, and Multipress are registered trademarks of Denison Eng. Div., ABSCO

DENISON HydrOILics
HYDRAULIC PRESSES • PUMPS • MOTORS • CONTROLS

▲ For more details circle NED-397 F9 on enclosed inquiry slip ▲

New model 36
SIMPLICITY CONVEYORS serve almost any conveying operation

The new Model 36 Conveyor is designed to meet the needs of manufacturers who do not require the capacity of heavy duty conveyors. Lightweight and compact, the low cost Model 36 is ideal for handling a great variety of light bulk materials with a minimum of maintenance.

The Model 36 makes provisions for any one of 5 different pan widths, from 4" to 12", and can be supplied in mild steel or (on special order) aluminum or stainless steel; with or without covers.

Stocked in 5' and 10' sections, units can be assembled up to 50' in length using only one drive assembly.

The Model 36 Conveyor is less than 14" in over-all height and requires only ¾ hp to 1½ hp motor (depending on the length of the conveyor).

Write today for more information about the versatile, self-cleaning Model 36 Conveyor.

206

Simplicity TRADE MARK REGISTERED
ENGINEERING COMPANY • DURAND 15, MICH.

▲ For more details circle NED-401 F9 on enclosed inquiry slip ▲

THE FIRST LIQUID HARDENER EVER MADE FOR CONCRETE FLOORS

To give hardness-in-depth!

LAPIDOLITH

Not a coating
Not a film...but a hardener that acts below the surface to become an integral part of the concrete floor

a product of SONNEBORN Research

Mail Coupon today for money-saving features and the BONDED GUARANTEE

L. SONNEBORN SONS, INC.
Building Products Division—Dept. N-69
404 Fourth Avenue, New York 16, N. Y.

☐ Send complete information on LAPIDOLITH and the BONDED GUARANTEE.
☐ Also include free copy of 128 page Building Construction and Maintenance Handbook.

Name_____ Title_____
Company_____
Address_____
City_____ Zone____ State_____

▲ For more details circle NED-402 F9 on enclosed inquiry slip ▲

• *Centerless Ground to extreme accuracy. Special new-type Equipment, assures concentric chamfered or formed ends—no cut-off burrs.*

Dowel—Straight—Countersunk—Angle and Spherical Ends
.020" to .1875" Diam.
.125" to 2" Length

Precise Specifications Accurately met. If requested on order, a surface analysis tape, showing surface in micro-inch measurements, will be furnished. Tape magnifies 39,370 times.

Small orders or volume production to your exact requirements and material specifications.

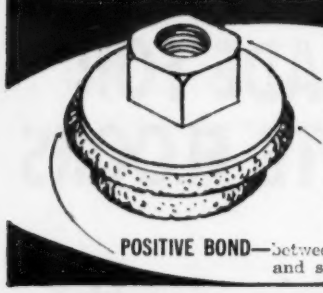
Quality Precision Work!
Prompt Deliveries!
Prices you will like!
SEND US PRINTS FOR QUOTATION

COMMERCIAL CENTERLESS GRINDING COMPANY
6605 CEDAR AVE., CLEVELAND 3, OHIO
Phone: ENdicott 1-3412

▲ For more details circle **NED-403 F9** on enclosed inquiry slip ▲

MORE THAN FIFTY MILLION SOLD TO THE AUTO INDUSTRY!

PLASTISOL SEALER NUTS



FREE-TURNING NUT—turns independent of washer assembly.

LOCKS SECURELY—heat treated, spring steel cup-shaped washer acts as an efficient lock washer.

POSITIVE BOND—between washer and sealant.

SPECIFICATIONS: 3/4" hex nut with 10-24 NC2 thread. Cupped spring steel washer 5/8" OD. Height of Plastisol sealant 0.125".

OTHER STANLEY FASTENER PRODUCTS ... in standard and special types and sizes are available for a very wide range of industrial applications.

WRITE FOR FREE SAMPLES—Stanley Industrial Hardware Sales, THE STANLEY WORKS, Dept. F, 58 Lake Street, New Britain, Connecticut.

AMERICA BUILDS BETTER AND LIVES BETTER WITH STANLEY

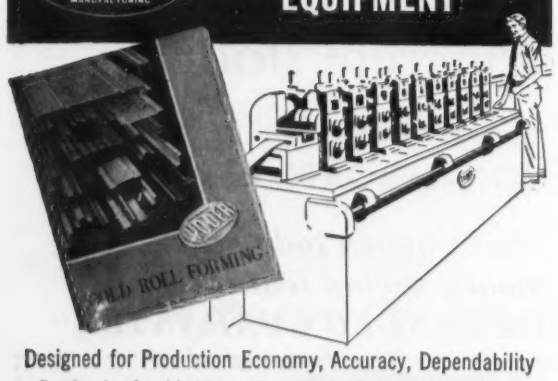
STANLEY
REG. U.S. PAT. OFF.

This famous trademark distinguishes over 20,000 quality products of The Stanley Works—hand and electric tools • drapery, industrial and builders hardware • door controls • aluminum windows • stampings • springs • coatings • strip steel • steel strapping—made in 24 plants in the United States, Canada, England and Germany.

▲ For more details circle **NED-404 F9** on enclosed inquiry slip ▲

ENGINEERING **YODER** MANUFACTURING

COLD ROLL-FORMING EQUIPMENT



Designed for Production Economy, Accuracy, Dependability

Send today for this 92 page handbook "Cold Roll-Forming". It thoroughly covers production of structural and ornamental shapes from stock up to ½" thick . . . reviews economic and mechanical possibilities of cold roll-forming . . . illustrates end uses and applications of roll-formed shapes.

THE YODER COMPANY
5547 Walworth Avenue • Cleveland 2, Ohio
Please send my copy of Yoder's "Cold Roll-Forming"

NAME _____
COMPANY _____ POSITION _____
ADDRESS _____
CITY _____ STATE _____

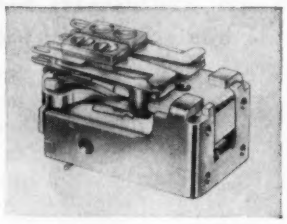
▲ For more details circle **NED-405 F9** on enclosed inquiry slip ▲

SIGNALING CONTROLLER
for industrial process or operation

Highly accurate, automatic control of industrial operations involving two-position action is possible with this signaling controller. It is used with any transducer generating a direct-current signal, such as a thermocouple, tachometer generator, or load cell. Corrective action occurs instantly when input signal deviation is detected. Amplifier with a 135 decibel power gain, red and green signal lights, built-in safety control, and construction to withstand vibration, shock, and adverse atmospheres are features. Ranges are 1 to 100 mu v. Made by **Thermo Electric Co.**, Saddle Brook, N. J.

▲ For more details circle **NED-406 F9** on enclosed inquiry slip ▲

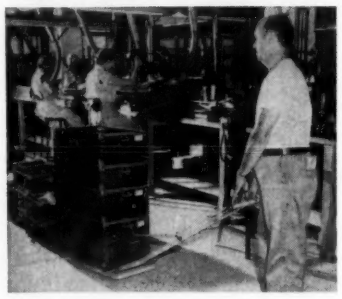
SUBMINIATURE RELAY
in 20-100 milliwatt sensitivities



Miniature type TQA relay is intended for direct-current operation at sensitivities from 20 to 100 milliwatts. A sensitivity of 15 milliwatts per hole is available for uses where shock and vibration are negligible. Contacts are rated 28 v dc, or 115 v ac resistive load, and have a minimum life of 100,000 operations. Operating temperatures range from −55 to 100° C, although a −65 to 125° C range can be ordered. Relay withstands up to 50-g shock and 10-g, 10 to 500-cps vibration. Hermetically sealed enclosures are available. Made by **Comar Electric Co.**, 3349 W. Addison St., Chicago 18, Ill.

▲ For more details circle **NED-407 F9** on enclosed inquiry slip ▲

FIBER TOTE BOXES
will not splinter, dent, or rust



Custom-built Kennett vulcanized fiber tote boxes for handling and storage of parts are offered in sizes from 0.625 to 2.3 cu ft. Boxes are stenciled on the sides with tare weights and have spring clips to hold "move" and "piece-count" tickets for identification. Handles at each end facilitate lifting, and corners and edges are metal reinforced. Boxes can be stacked and will not splinter, crack, dent, or corrode. Made by **National Vulcanized Fibre Co.**, 1059 Beech St., Wilmington 99, Del.

▲ For more details circle **NED-408 F9** on enclosed inquiry slip ▲

...for easier, safer, more economical welding...

The NEW, modern

SuperGrip® ELECTRODE HOLDER

4 MODELS:
A-M Aluminum 300 Amps. 1/4" rod
C-S Copper 250 Amps. 7/32" rod
C-M Copper 300 Amps. 1/4" rod
C-L Copper 500 Amps. 3/8" rod

Ask for Bulletin No. 65

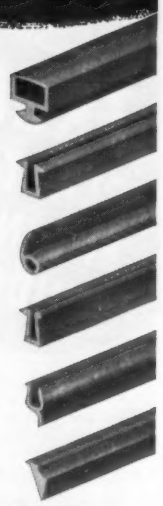
OUTSTANDING FEATURES:
1. Rugged, long-wearing, interchangeable jaw insulators.
2. Powerful spring for extra "bite" in jaws.
3. Ball-point set screw grips cable for maximum current density.
4. Exclusive "necked-down" handle cuts cable fatigue at handle and cable connection.

THE FIBRE-METAL PRODUCTS COMPANY
CHESTER, PENNSYLVANIA
In CANADA: *Fibre-Metal (Canada) Limited, Toronto*

▲ For more details circle **NED-409 F9** on enclosed inquiry slip ▲

EXTRUSIONS

TO YOUR
SPECIFICATIONS
By CONNEAUT



If you need production of extruded plastic shapes, or special plastic compounding to meet unusual product specifications, write, wire or phone Conneaut. We have the experience and facilities to meet your requirements for either or both efficiently, rapidly and economically. At no obligation we'll quote from your prints and specifications, or analyze your problem and make recommendations.

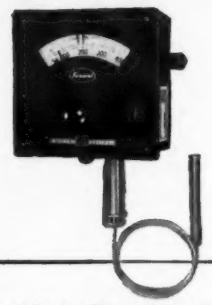
Write for FREE Illustrated Brochure
giving complete details on Conneaut's custom service in plastic compounding and extruding.
440-D

CONNEAUT
RUBBER & PLASTIC COMPANY
CONNEAUT, OHIO

▲ For more details circle **NED-410 F9** on enclosed inquiry slip ▲

IT'S A CINCH...

to install, operate, and maintain this temperature controller!



No need for "special" training with the Fenwal 541 Temperature Indicator Controller! This compact liquid-filled bulb and capillary type of controller installs practically in *minutes* . . . sets with a turn of the handy control knob. And its control switches can be replaced without even disturbing the internal mechanism! Durable, too. All moving parts operate in opposition to compensate for wear and keep accuracy consistently high. Welded steel case protects against splashing and dust. Available in 5 different temperature ranges within the span of −150° to +700°F, it can control as many as four circuits simultaneously. Choice of bulb styles. *Hundreds* of combinations! Current ratings: 15 and 20A-125VAC; .50A-125VDC; .25A-250VAC. For full details, write for Bulletin MC-176. Fenwal Incorporated, 276 Pleasant Street, Ashland, Mass.

ANOTHER EXAMPLE OF HOW **Fenwal** Controls Temperature . . . *Precisely*

▲ For more details circle **NED-411 F9** on enclosed inquiry slip ▲

METERED Variacs®

Type W5MT3W Metered Variac (Voltmeter-Wattmeter): **$110.** (shown)

Type W5MT3A Metered Variac (Voltmeter-Ammeter) **$85.00** (similar in appearance)

NEW cased Type W5 VARIACS are now available in two different models: one with a 0 to 150-volt output voltmeter and a 2-range ammeter for load currents of 0-1 or 0-5 amperes; another model with the same voltmeter and a 2-range wattmeter reading 0-150 and 0-750 watts.

Both include a W5 VARIAC, the meters, a current transformer, necessary switching and adequate meter shielding.

Three-wire line cord and 3-wire outlet receptacle (accepting parallel 2-wire plug) are provided. The ammeter and wattmeter range switches can be switched under load.

Write for Complete Data

GENERAL RADIO COMPANY
WEST CONCORD, MASSACHUSETTS

Broad Avenue at Linden, Ridgefield, N. J. **NEW YORK AREA** 1000 N. Seward St. **LOS ANGELES 38**
8055 13th St. Silver Spring, Md. **WASHINGTON, D. C.** 1150 York Road, Abington, Pa. **PHILADELPHIA**
1182 Los Altos Ave., Los Altos, Calif. **SAN FRANCISCO** 6605 W. North Ave., Oak Park, Ill. **CHICAGO**
In **CANADA:** 99 Floral Parkway, **TORONTO 15**

▲ For more details circle **NED-412 F9** on enclosed inquiry slip ▲

IT'S EASY TO STRIP OFF PAINT and Solve Your Stripping Problems with—

EPOXYSTRIP

PAINT STRIPPER—Saves Time and Money!

A new more powerful paint stripper that outstrips all others! No organic finishes have yet resisted this amazing paint stripper. It was especially formulated to remove epoxies . . . with the same ease that it removes baked enamels, lacquers, etc. No stripping scum—clean rinsing!

SEND FOR FREE BROCHURE

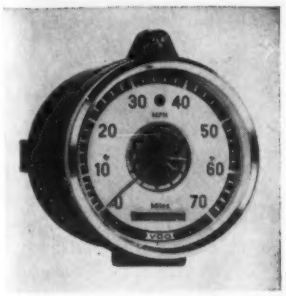
- EPOXYSTRIP WILL NOT HARM SOFT METALS
- ECONOMICAL—MORE JOBS PER GALLON AT LOWER COST
- NO SCRUBBING OR MANUAL ASSISTANCE
- RECOMMENDED BY LEADING FINISH MANUFACTURERS

JOBBERS: Beck EPOXYSTRIP sells on demonstration. Try it and see for yourself.

BECK EQUIPMENT COMPANY
3350 WEST 137th STREET — CLEVELAND 11, OHIO

▲ For more details circle NED-413 F9 on enclosed inquiry slip ▲

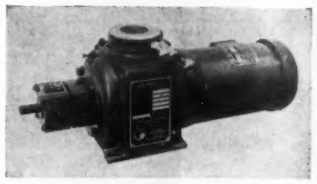
TACHOGRAPH
records vehicle, machine operation



This VDO tachograph records vehicle operation in chart form for uninterrupted periods up to 7 days. It records speed, mileage, and whether the vehicle is moving or stopped. Warning light flashes at any preadjusted speed. Models for recording revolutions per minute are also available for use on plant machinery. Standard models are for 24-hr or 7-day operation. Made by **Engler Instrument Co.**, 250 Culver Ave., Jersey City 5, N. J.

▲ For more details circle NED-416 F9 on enclosed inquiry slip ▲

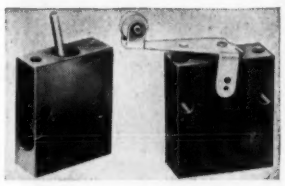
VARIABLE SPEED DRIVE
has wide range planetary reducer



Planetary reducer of this infinitely variable speed drive provides speed ranges from 300 rpm to 1 rph, accurate to one part in 4000. Reducer develops 100 lb-in. torque. Micrometer, remote micrometer, remote electrical, pneumatic, and automatic controls are available. In addition to planetary reducer, transmission can be furnished with standard output for speed ranges from 1800 rpm to 0 or with various built-in step-up or step-down assemblies. It is also available without motor, or with special or explosionproof motors. Single and two stage in-line reductions, or right angle worm reductions are obtainable. Made by **Graham Transmissions Inc.**, Menomonee Falls, Wis.

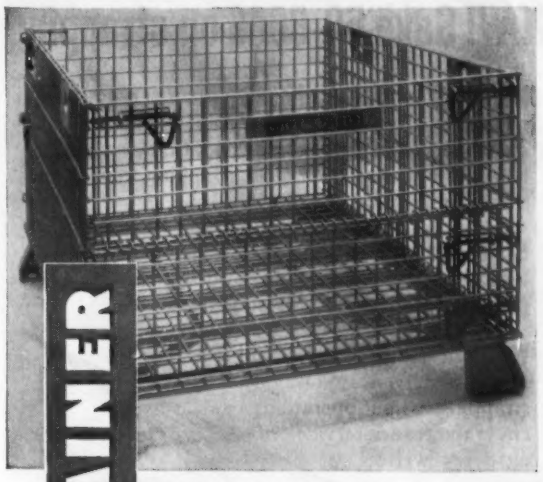
▲ For more details circle NED-417 F9 on enclosed inquiry slip ▲

MINIATURE VALVES
feature snap-action operators



Miniature three-way, two position Micro Valve has overcenter, snap - action operator for instantaneous response with no neutral position. Two - way shutoff and four-way designs are also available. Used in virtually any gas or fluid service, valves have orifice sizes of 1/16 and 1/8 in. for operating pressures from 0 to 100 psi, and temperatures from −40 to 200° F. Valve bodies range as small as 5/8 x 1 1/2 x 1 3/4 in. Uses include pneumatic and hydraulic machinery, control and instrument panels, test equipment, pneumatic control systems and lab apparatus. Spring-return and push-pull solenoid operators are available. Made by **Instruments, Inc.**, Box 556, Tulsa, Okla.

▲ For more details circle NED-418 F9 on enclosed inquiry slip ▲



WIRE-TAINER

STORING ★ HANDLING ★ SHIPPING

- Virtually indestructible—electro-welded steel rod construction
- Saves money coming and going—easy to lift and stack, folds flat to save on return trips
- One and two-ton capacities
- Side or end openings
- Available with eyes for crane lifting, increased side heights, caster plates and casters, horizontal and vertical dividers

FREE LITERATURE describing all WIRE-TAINER advantages. Drop us a line.

See us at MHI Exposition—Booth 1102

SPRINGPORT STEEL PRODUCTS COMPANY
Springport, Michigan

▲ For more details circle NED-419 F9 on enclosed inquiry slip ▲

Cuts Bending Costs

AS MUCH AS 50%

NEW PINES 3T PRESS

Makes Bends Progressively To Varied Angles In Multiple Planes

Quality bends at production speeds that are 2 to 3 times faster than conventional methods, are now possible with the new Pines 3-T Bending Press. Many tubular parts in sizes ranging up to 1" O.D. are now formed at net speeds in excess of 1000 bends per hour. Up to 9 different bend angles can be produced in a single setup. Adjustable automatic indexing stops accurately control depth of ram stroke. Open tooling area permits rapid progressive bending in varied planes. High production speed is just part of the story. Unusually smooth, good looking bends are also produced to meet the quality demands of automotive, furniture, toy, office equipment, and appliance manufacturers. Wing dies are designed to move in ways as a bend is made, and their pivoting action is hydraulically cushioned through bearing-mounted rocker arms. This principle eliminates scratches or draw marks and produces wrinkle-free bends with very little distortion.

PINES ENGINEERING CO., INC.
Specialists in Tube Fabricating Machinery 637 WALNUT - AURORA, ILLINOIS

FREE DATA SHEETS
Get the complete cost cutting story on this Press today. Larger models for tubes to 2" O.D. available.

PRODUCTION BENDING • DEBURRING • CHAMFERING MACHINERY

▲ For more details circle NED-414 F9 on enclosed inquiry slip ▲

Hanger at N. Y. International Airport

These Concrete Floors are protected with SonNoMar for Lockheed Aircraft Service-International, Inc.

SonNoMar is a blend of newly-developed resins. Available in red, green, light gray, dark gray or transparent finish. Its attractive glossy coating resists trucking, oils, greases and most chemicals.

USE SonNoMar to dustproof concrete. It binds surface particles together and seals pores with a flexible finish highly resistant to abrasion.

USE SonNoMar for easy maintenance. Its tough, smooth, glossy surface is readily cleaned. It retains its attractive appearance.

SonNoMar

A Product of Sonneborn RESEARCH

L. SONNEBORN SONS, INC.
Building Products Division—Dept. N-69
404 Fourth Ave., New York 16, N. Y.

☐ Send further information on SON NO MAR for concrete floor protection.
☐ Also send FREE 128-page Building Construction and Maintenance Handbook.

NAME_____
COMPANY_____
ADDRESS_____
CITY_____ ZONE____ STATE____

▲ For more details circle NED-420 F9 on enclosed inquiry slip ▲

PROTECTION AGAINST . . . liquids, fumes, shavings, dirt

APPLETON®

JIC Liquid Tight Junction Box

Another APPLETON "FIRST"

Patent Pending

JIC blank box for special installations. May be drilled for custom installation of Uni-Seal hubs or STN connectors.

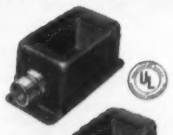
Also Manufacturers of:

Safety engineered to JIC specifications, this new heavy gauge steel junction box gives positive protection from liquids, fumes, shavings, dirt and other foreign matter. Box body is of one-piece welded construction without holes. May be custom drilled. Special gasket seal for cover. Exceptional wiring room . . . outside dimensions: 4 1/8" long, 2 5/8" wide, 2 1/4" high. No sharp edges. Extra rigidity. Exclusive full width bridge for additional screw support. Next time you need a liquid-tight junction box . . . specify APPLETON JIC! Full information on request.

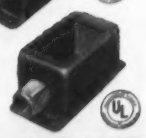
Sold Through Franchised Distributors Only

plus U.L. Approved Assemblies

JIC Box with STN Sealtite Connector for 1/2" or 3/4" Sealtite Conduit



JIC Box with Uni-Seal Hub for 1/2" or 3/4" Rigid Conduit



APPLETON ELECTRIC PRODUCTS

APPLETON ELECTRIC COMPANY • 1701 Wellington Avenue • Chicago 13, Illinois

▲ For more details circle NED-415 F9 on enclosed inquiry slip ▲

NOW! Save 50-80% on strapping

Twice as much for the money . . . Oval steel strapping gives you high tensile strength . . . a greater lineal feet per pound yield. Countless users have proved that Oval steel strapping cuts their strapping costs 50 to 80%.

Easier to use. All you need is *one* tool to tension, twist and cut the strapping. You save time, manpower and equipment investment.

Worth investigating. For full details on how you can use Oval steel strapping in your operation, circle the reader service card, or write:

A.J. GERRARD AND COMPANY
1954 Hawthorne Blvd. • MELROSE PARK, ILLINOIS

▲ For more details circle NED-421 F9 on enclosed inquiry slip ▲

EASTERN CENTRIFUGAL JOB-RATED PUMPS

Original equipment manufacturers have chosen the Eastern D-11 Centrifugal Pump for 24,897 successful installations. With eighteen pounds of compact design (9¾" x 4⅝"), this close-coupled, single-stage centrifugal pump with induction type motor provides an ideal job rating for many installations.

The D-11 and other Eastern Centrifugal Pumps are available in 18-8 Type 303 and Type 316 Stainless Steel, Monel, Hastelloy "C", Cast Iron and Bronze. They range from ⅙th to ¾ H.P. with capacities up to 70 G.P.M., pressures to 65 P.S.I.

SEND FOR BULLETIN 120-R

Eastern INDUSTRIES, INC.
100 SKIFF ST., HAMDEN, 14, CONN.

▲ For more details circle NED-422 F9 on enclosed inquiry slip ▲

Make your next connection with asg UNIVERSAL JOINTS

They are made to provide smooth, more efficient transmission of power and are available from stock in 13 sizes with bored or solid hubs ranging from .375" to 4.000". Special bores, bores with keyways or setscrews are available upon special order.

Joints with hub diameters of .750" and larger have a self-closing snap ball oiler while the small pin is held in place with a self-locking snap ring.

Send today for Bulletin No. 527 describing the full line of ASG Universal Joints available from your nearest distributor.

AMERICAN STOCK GEAR DIVISION
PERFECTION GEAR COMPANY, HARVEY, ILL., U.S.A.

▲ For more details circle NED-423 F9 on enclosed inquiry slip ▲

ADJUSTABLE DRILLHEADS have cartridge type spindle plate

Cartridge type spindle plate of Thriftmaster universal joint drillheads provides spindle rigidity and accuracy, yet affords adjustability to various hole patterns. Removal of one lock screw permits removal of the cartridge containing spindle, bearings, and related parts in one unit. Construction can be furnished with any Thriftmaster standard, semistandard, or special universal joint adjustable drillhead. Spindle assemblies have ball bearings as standard, or interchangeable radial and ball thrust bearings for close center applications. Photo shows an eight-spindle head. Made by **Thriftmaster Products Corp.**, 1010A N. Plum St., Lancaster, Pa.

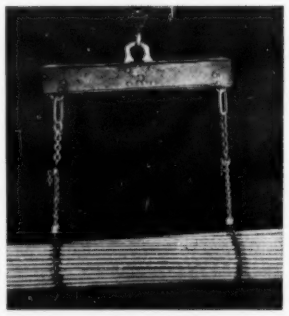
▲ For more details circle NED-424 F9 on enclosed inquiry slip ▲

FIRST AID SPRAY is antiseptic

Packaged in white, 4-oz round plastic-coated bottle, Obtundia first aid aerosol spray provides antiseptic, surface anesthetic, germicidal, fungicidal, and surgical dressing properties. Bottle has a precision valve and gold overcap. Price is $3. Offered by **Otis Clapp & Son, Inc.**, 439 Boylston St., Boston 16, Mass.

▲ For more details circle NED-425 F9 on enclosed inquiry slip ▲

BUNDLING CHAIN has forged automatic locking device



One end of this bundling chain is permanently fastened to a drop-forged automatic locking device. Free end is put through the housing, and a grab hook on the dropper chain pulls the chain tightly around the bundle. Hook's latch falls in between the links, locking the bundle securely. In unlocking, chain is again engaged by grab hook and lifted, allowing slack in the chain for flipping over the latch. When bundle is set down, chain is run through the housing, automatically releasing the load. Larger lock weighs 7 lb and is used with ½, 9/16, and ⅝ in. chain. Smaller lock weighs 2 lb and is used with 5/16 to ¾ in. chain. Made by **American Chain & Cable Co.**, American Chain Div., York, Pa.

▲ For more details circle NED-426 F9 on enclosed inquiry slip ▲

New Gleason **POWERTRAK** Increases Cable, Hose Life on your Equipment-in-Motion!

Write for suggestions on profitable POWERTRAK applications to your Equipment-in-motion

Your equipment will benefit with POWERTRAK—amazing German invention for carrying power cable or hose to and with equipment in motion. Offers many advantages on machine tools, lathes, grinders, planers, presses, cranes and others. Protects power cables, oil, gas, and air hoses against wear from bending, crushing, abrasion, friction, pulling stresses and strains. Avoids machine downtime and cable or hose replacement expense.

POWERTRAK saves space, permits more flexibility in machine design. Handles multiple cable and hose up to 2½" diameter, up to 70 feet of travel, at moving speeds up to 300 feet per minute.

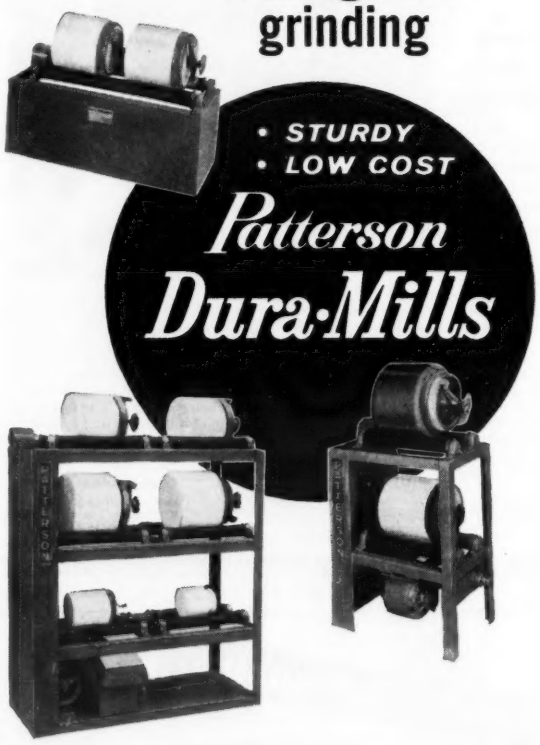
Gleason Reel Corp
Exclusive Licensees for United States, Canada, Mexico
738 N. Plankinton Ave., Milwaukee 3, Wis.
TAKE-UP REEL HEADQUARTERS FOR ALL INDUSTRY

▲ For more details circle NED-427 F9 on enclosed inquiry slip ▲

Robertshaw's Vibraswitch Malfunction Detector prevents costly machinery damage by actuating an alarm or shutting down machinery the instant excessive vibration occurs. Vibraswitch anticipates trouble caused by failing bearings, bent shafts, broken blades or overspeeding and can easily be installed on pumps and motors, cooling tower fans, compressors and blowers, gas and diesel engines, and turbines. For further detail write for Bulletin RF-586.
Aeronautical and Instrument Division, Robertshaw-Fulton Controls Co., Santa Ana Freeway at Euclid Ave., Anaheim, Calif.

▲ For more details circle NED-428 F9 on enclosed inquiry slip ▲

For LABORATORY and SMALL BATCH mixing and grinding



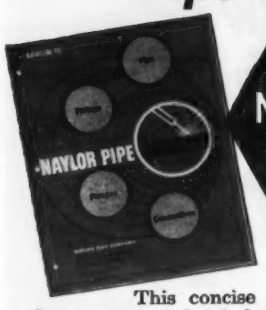
Patterson DURA-MILLS offer top values in quality, simplicity, safety and operating convenience at low cost. Fully portable, compact, with welded frames and extra powerful roller chain drives, these modern jar mills are smooth-running, keep jars always centered on the rollers, and have oversize Oilite bearings. Wide range of models. Details in free bulletin.

Special alumina-content high fired porcelain jars give twice the wear of ordinary jars—far less contamination per batch.
½ pint to 6½ gals.

THE **Patterson** FOUNDRY AND MACHINE COMPANY
A Division of Ferro Corporation
East Liverpool, Ohio

▲ For more details circle NED-429 F9 on enclosed inquiry slip ▲

Helps Answer Pipe Problems!



CONDENSED
NAYLOR CATALOG
Offers Data on Pipe and Fittings

for

- Water lines
- Air lines
- Compressed air lines
- Gas lines
- Ventilating lines
- Process lines
- Pneumatic conveyors
- Sludge lines
- Vacuum lines
- Drainage lines

This concise catalog presents helpful data on NAYLOR pipe, fittings and connections for use on large diameter pipe applications. Includes standard specifications on pipe sizes from 4" to 30" in diameter—in steel, alloys and stainless steel.

Ask for Condensed Catalog No. 59.

NAYLOR PIPE Company

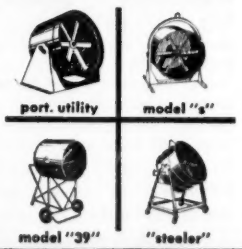
1247 E. 92nd St., Chicago 19, Illinois
Eastern U.S. and Foreign Sales Office:
60 East 42nd Street, New York 17, N. Y.

▲ For more details circle NED-430 F9 on enclosed inquiry slip ▲

increase worker efficiency with Aerovent MANCOOLER FANS

For spot cooling of men and machines, exhausting dust or for general air circulation, these units aid in improving efficiency and production.

Five portable types—cradle, pedestal and 2 or 4 wheeled—each adjustable for 180° discharge. 24" to 48" (portable utility 16" to 36".) 2, 4 or 6 blades. Heavy-duty construction, with welded-steel guards for maximum safety.



write for free bulletin 250

Aerovent FAN CO. INC.
Ash and Blake Sts. Piqua, Ohio

▲ For more details circle NED-431 F9 on enclosed inquiry slip ▲

SMALL STEAM TRAP
. . . but large capacity!

New Design
New Operating Principle

Small as a tee fitting! That's the Sarco TD . . . all sizes ¾ to 1"!

But don't let the small size fool you! ½" Sarco TD, for example, has capacity of 1280 lbs/hr, 150 psi, saturated steam temperature.

Capacity is determined, *not* by a bulky body, but by the effective orifice, valve action, pressure drop, and condensate temperature.

Few of many advantages

Same trap and large capacity seat for all pressures, 10 to 600 psi . . . light or heavy loads. Self-adjusting. Has no valve mechanism. Only one moving part.

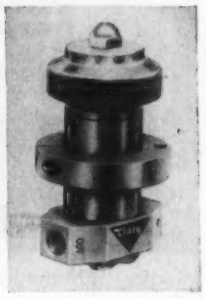
Ask for 60-day trial trap and strainer. No cost or obligation. Buy *only* if satisfied. Specify size, use. Sarco Co., Inc., 635 Madison Ave., New York 22, N. Y.
2228-F

SARCO Thermo-Dynamic STEAM TRAP

THE MODERN TRAP THAT IS MAKING STEAM TRAPPING HISTORY

▲ For more details circle NED-432 F9 on enclosed inquiry slip ▲

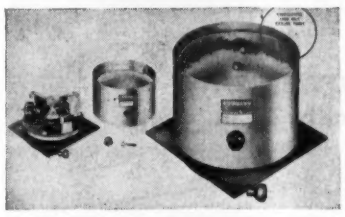
PRESSURE REGULATOR
for use with air, nitrogen, helium



Simple, 1½-lb pressure regulator for use with air, nitrogen, or helium can be used in missiles and testing. Maximum upstream and downstream operating pressures are 4000 and 3000 psi; proof pressures, 6000 and 4500 psi. Hand loader is adjustable from 3000 psi regulated pressure to 0, with a variance of ½ per cent in the higher range down to 10 per cent in the low range. Through-flow area is 0.003 in. squared when fully open. Ambient range is −65 to 160° F. Made by **Clary Corp.**, Clary Dynamics Div., 408 Junipero St., San Gabriel, Calif.

▲ For more details circle NED-433 F9 on enclosed inquiry slip ▲

VIBRATORY PARTS FEEDER
interchangeable bowls now featured



Interchangeable bowls and rheostat feed control are improvements made in redesigned vibratory feeder for small parts. Feeders deliver parts to automatic production machines to obtain optimum production rates. Units can be tooled and oriented on the job. Made by **Burklyn Co.**, 3429 Glendale Blvd., Los Angeles 39, Calif.

▲ For more details circle NED-434 F9 on enclosed inquiry slip ▲

MACHINERY MOUNT
springs absorb vibration and shock

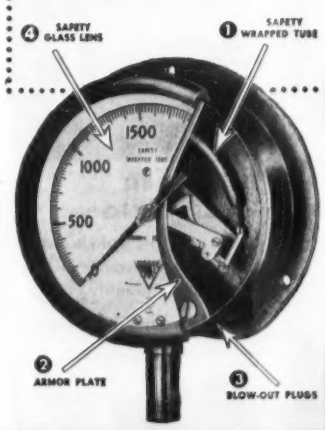
Air conditioning, heating, and ventilating applications where noise and vibration are equally vexing problems are served by the Type LR machinery mount. Steel springs are the vibration and shock absorbing medium and the rubber housing prevents transmission of high frequency disturbance and noise. Mounting can carry loads ranging from 150 to 1400 lb per isolator. Minimum operating height is 4 in. Although developed for use with fans, cooling towers, piping, furnaces, turbines, air handling and conditioning units, and motor generator sets, it can also be used to protect machine tools, instruments, and precision equipment from vibration and shock generated by other apparatus. Made by **Korfund Co.**, 48-19H 32nd Place, Long Island City 1, N. Y.

▲ For more details circle NED-435 F9 on enclosed inquiry slip ▲

KUNKLE GAUGES
for Process Applications

AVAILABLE IN MANY TYPES and SIZES
15 p.s.i., or 30" of vacuum, to 20,000 p.s.i.

...and the NEW KUNKLE SAFETY CASE GAUGES



...safer because:

1. Rifle-bored steel Bourdon tube is safety wrapped.
2. Armor plate behind dial.
3. Blowout plugs located for downward relief.
4. Shatterproof dial lens.
5. Solid back gives full area protection.

by the MAKERS of DEPENDABLE KUNKLE VALVES

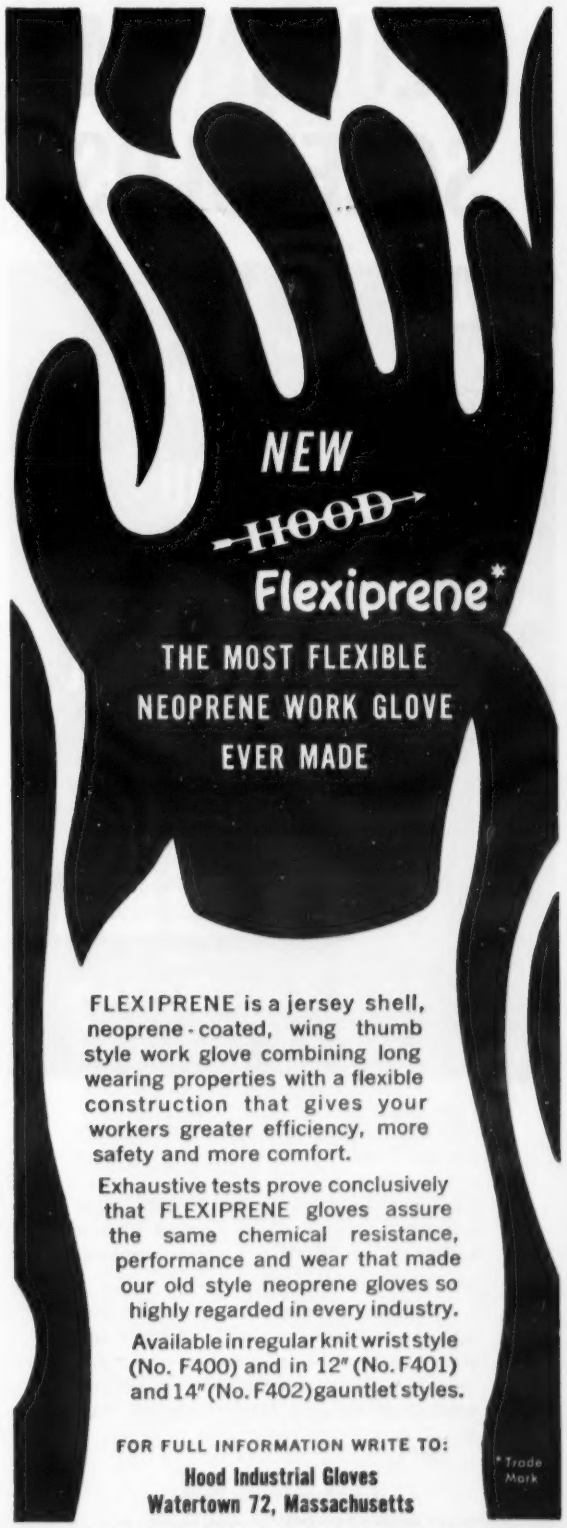
WRITE FOR CATALOG & ENGINEERING DATA
KUNKLE VALVE CO. · FT. WAYNE, IND.

▲ For more details circle NED-436 F9 on enclosed inquiry slip ▲

It's easy to cut costs with this hopper. Use it instead of a tote box for handling all kinds of wet or dry, hot or cold bulk materials. Pick it up with your lift truck . . . move it to its destination . . . flip the latch and the hopper automatically dumps its load, rights itself, locks itself. One man does the entire job in a fraction of the usual time. Roura Self-Dumping Hoppers are ruggedly built of 3/16" steel plate with continuous arc-welded seams. Five sizes, ½ to 2 yard capacity, mounted on live or semi-live skids with choice of wheels. Standard models shipped from stock. Also available in stainless steel or galvanized. For details and literature, write ROURA IRON WORKS, INC., 1415 Woodland Ave., Detroit 11, Mich.

ROURA Self-Dumping HOPPER

▲ For more details circle NED-437 F9 on enclosed inquiry slip ▲



HOOD INDUSTRIAL GLOVES
NEOPRENE · PLASTIC · RUBBER

▲ For more details circle NED-438 F9 on enclosed inquiry slip ▲

metal merchandising cabinets

by **WATERLOO**

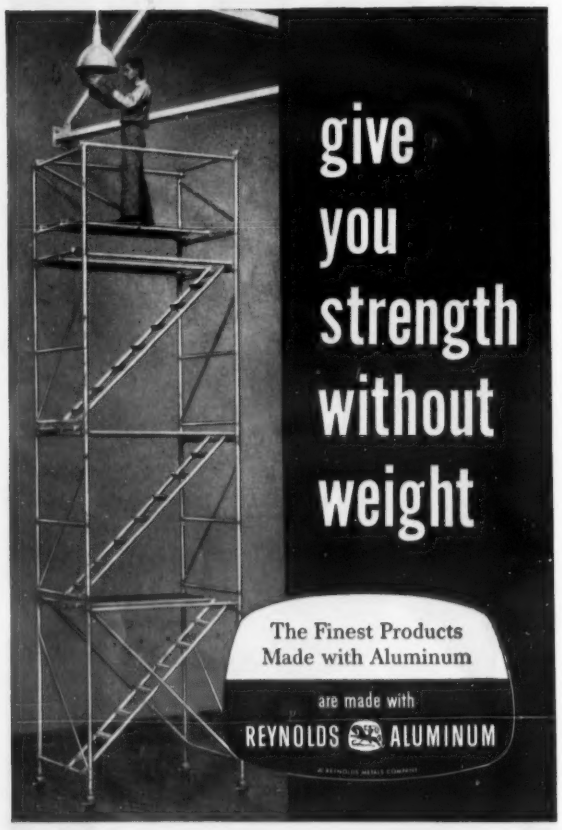
CAN MAKE SALES FOR YOU

Skillfully designed for your special needs . . . expertly engineered for long service . . . attractively finished for sales appeal. Submit your specifications for ideas and cost estimates.

WATERLOO VALVE SPRING COMPRESSOR CO.
Waterloo, Iowa

▲ For more details circle **NED-439 F9** on enclosed inquiry slip ▲

ALUMINUM SCAFFOLDS



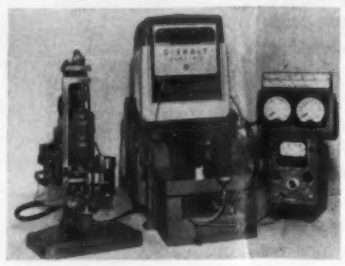
Aluminum weighs only one third as much as steel. Think what this means when moving, erecting or taking scaffolds down. Aluminum scaffolds won't rust; this eliminates rusty joints and rusted fittings; means easier, quicker handling and maintenance-free long life.

Many scaffold manufacturers make aluminum scaffolds in a variety of types and sizes. For the names of those who use strong, lightweight, rustproof Reynolds Aluminum, write direct *Reynolds Metals Company, P.O Box 2346 NO-6, Richmond 18, Virginia.*

Watch Reynolds new TV show
"WALT DISNEY PRESENTS"—every week on ABC-TV

▲ For more details circle **NED-440 F9** on enclosed inquiry slip ▲

BALANCING MACHINES
for high speed rotating parts



Line of high speed, bench - type balancing machines will handle miniature belt, air, or electrically self - driven parts or assemblies. Miniature armatures, aircraft and missile gyros, small spindles, turbines, and textile parts are typical. Unbalances causing work support movements greater than 0.000002 in., with work rotating at any speed between 1000 and 3000, or between 4000 and 12,000 rpm, are quickly measured and located. Standard equipment includes an amplifier, direct-reading unbalance meter, and a strobe lamp assembly to show angle of unbalance. Supports for work weighing from ½ to 8 oz, or from 8 oz to 10 lb are furnished. Made by **Gisholt Machine Co.**, 1245 E. Washington Ave., Madison 10, Wis.

▲ For more details circle **NED-441 F9** on enclosed inquiry slip ▲

BENCH TYPE POWER SAW
9-in. blade cuts 2.5 in. deep

Fifteen major design changes afford increased power, safety, and operating versatility in the Model 925 Power Shop, a bench-type radial-arm power saw which replaces Model MFB. Enclosed direct - drive 2-hp motor has flat-bottom design which allows a 2.5-in. depth of cut with a 9-in. blade. Motor can be tilted 360 degrees. Electromechanical brake stops the blade 5 sec after power shutoff. Drop-leaf table up-front eliminates saw overhang on wide crosscuts and ripping operations. Cutoff scale facilitates crosscutting, and cam-type starting key switch actuates in any direction. Saw is priced at $239. Made by **American Machine & Foundry Co.**, DeWalt Div., Dept. M, 14 Fountain Ave., Lancaster, Pa.

▲ For more details circle **NED-442 F9** on enclosed inquiry slip ▲

Metal Cutting Machines

Michigan Special Machine Co.—Pictures and drawings of various models of high production metal cutting machines and components are content of 14-page catalog. They are designed for drilling, reaming, tapping, spot facing, chamfering, nut driving, boring, milling, and other operations. General machining data are included.

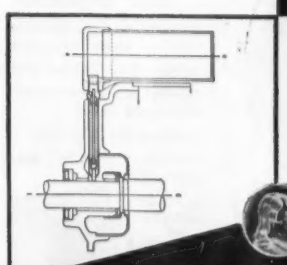
▲ For more details circle **NED-443 F9** on enclosed inquiry slip ▲

new lifetimed MOTORS

Franklin Electric

LIFETIMED OIL SUPPLY

NOW . . . maintenance-free lubrication for O.E.M. motors of ⅓ to 1½ H.P. ratings; 56-frame; drip-proof, open or totally enclosed; sleeve-bearing; and with or less capacitor.



LIFETIMED LUBRICATION

Feed devices admit oil to bearing wick cavity in time-controlled quantity.

Free Data Folder

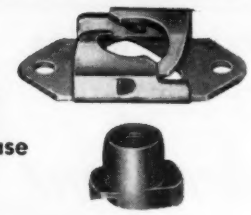
Franklin Electric Co., Inc.
BLUFFTON, INDIANA

FACTS about SELF-LUBE MOTORS

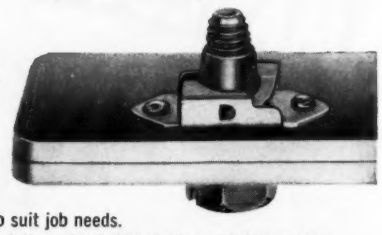
▲ For more details circle **NED-444 F9** on enclosed inquiry slip ▲

▲ For more details circle **NED-445 F9** on enclosed inquiry slip ▲

NEW VARIGRIP... ESNA® quick-release FASTENER



Consider these unique advantages:



1. Two-piece unit consisting of a self-locking Elastic Stop nut as the latch-lock and a retainer basket.
2. Stop nut fits any standard ¼"-20 bolt. User supplies bolt in head style to suit job needs.
3. When bolt is installed, the nut is held in basket and tightened to the exact setting required by structure thickness. Infinite adjustment possible for full threaded length of the bolt.
4. Eliminates inventory of multiple length studs.
5. Bolt-nut latch-lock can be tightened or reset at any time.
6. One quarter-turn lock and unlock action; high re-usability.

Available in ¼"-20 size only. For complete design information write to Dept. 533-637

ELASTIC STOP NUT CORPORATION OF AMERICA
2330 Vauxhall Road, Union, New Jersey

▲ For more details circle **NED-446 F9** on enclosed inquiry slip ▲

You can't beat Sanding with a

MITY-MIDGET

LIGHTWEIGHT, FAST, DEPENDABLE

Weighing only 4 pounds . . . yet so powerful you can't stall it by standing on it . . . this Air Driven, Orbital Action Sander gives a perfect finish, quickly and easily.

See how "Mity-Midget" can save you time and money. Write for a complete catalog today.

NATIONAL-DETROIT, INC., ROCKFORD, ILLINOIS

▲ For more details circle **NED-447 F9** on enclosed inquiry slip ▲

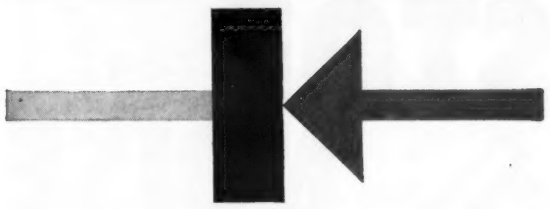
● Peak capacities from both new and old machines! Lipe equipped automatics meet and beat competition by delivering 90% of gross geared capacity. Continuous feeding of stock of practically every length, shape and material in close-tolerance feedouts.

● Eliminates time and energy consuming hand-loading to free operators for finer work on quality . . . machine set-ups . . . care of tools. Get full information. Write or phone today.

Lipe-ROLLWAY CORPORATION SYRACUSE 1, N.Y.

PIONEERS IN PNEUMATIC BAR-FEEDING

▲ For more details circle **NED-448 F9** on enclosed inquiry slip ▲



OVERCURRENT PROTECTION FOR SILICON AND GERMANIUM RECTIFIERS? . . . CALL ON HEINEMANN

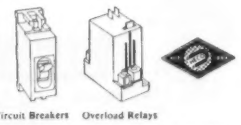
Because metallic power rectifiers can be damaged by relatively small overcurrents, they must be given effective, close-tolerance protection. Overload amperage must not be allowed to exceed tolerable limits.

Heinemann hydraulic-magnetic circuit breakers and relays have proven adequate to the job in many instances. Engineered to the demands of the particular application, they are now used successfully by a number of leading electrical equipment manufacturers.

Generalized statements are difficult on this application. Often circuit modifications are necessary.

While they do not have all the answers concerning protection of metallic rectifiers, Heinemann engineers may be able to help you, too.

Your inquiries are invited.



HEINEMANN ELECTRIC COMPANY
106 Plum St., Trenton 2, N.J.
S.A. 1751

▲ For more details circle **NED-449 F9** on enclosed inquiry slip ▲

APPLICATIONS UNLIMITED!

Equipto Angle

LEADS in versatility, Thousands of uses.
LEADS in finish with HOT DIPPED galvanized finish. Can't rust.
LEADS in strength.
LEADS in interchangeability with other makes.
LEADS in availability from ample stocks.
LEADS in know-how . . . over 50 years in equipment business.

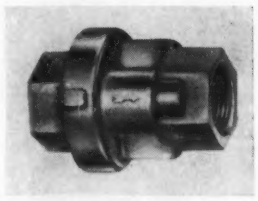
Send today for FREE copy of the new IDEA BOOK No. 299

Equipto
Slotted Angle Division
690 Prairie Avenue
Aurora, Illinois

Manufacturer of World's Finest Steel Shelving - Slotted Angle - Bins - Drawer Units - Lockers - Carts - Benches.

▲ For more details circle **NED-450 F9** on enclosed inquiry slip ▲

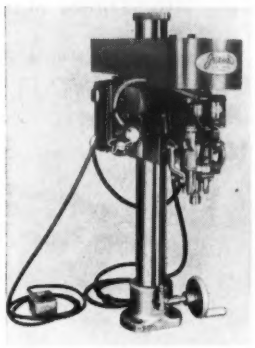
FLOW REGULATOR in 0.2 to 50 gpm sizes for water



A specified rate of flow is maintained regardless of pressure or temperature changes by this L-P-D Measurflo flow regulator. Usable on hot or cold water, it is made in 49 sizes with rates from 0.2 to 50 gpm for pressures to 180 psi and temperatures to 160° F. Control operates noiselessly and is made for 1/4 to 1 1/4-in. pipe sizes by **Hays Mfg. Co.**, Automatic Controls Div., 450 W. 12th St., Erie, Pa.

▲ For more details circle **NED-451 F9** on enclosed inquiry slip ▲

LEAD SCREW TAPPERS automatic, adjustable pitch units



Five standard models with four-speed pulleys that provide 575, 958, 1437, and 2415-rpm speeds are offered in this line of automatic, adjustable pitch lead screw tappers. They are adaptable to any drill press table or production line. Air and electric controls for the automatic tapping cycle can be interconnected with indexing table controls. Tap depth is electrically controlled. Cycle button or foot switch, hand-operated lead screw units, and multiple spindle heads on certain models are options. Capacities offered are No. 0 to 12, 1/4 to 5/8 in., No. 0 to 5/16 in., and No. 10 to 5/8 in. Made by **Jarvis Corp.**, Stack Street, Middletown, Conn.

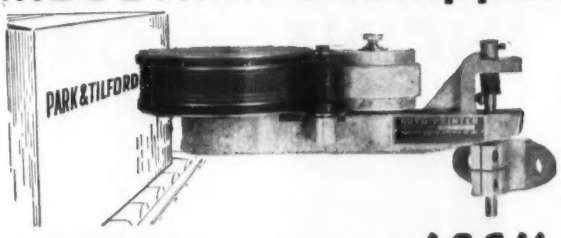
▲ For more details circle **NED-452 F9** on enclosed inquiry slip ▲

MACHINE TOOL SWITCH withstands 45 million actuations

All major friction points of the Loxswitch Model M machine tool limit switch are either nylon or oil impregnated bearings. This feature, plus nylon-to-nylon latch mechanism, results in a switch mechanism capable of 45 million cycles or actuations. Switch measures only 1 7/16 x 3 7/8 in. and is available in plug-in style. It has a 600-v industrial rating, 3/8-in. contact gaps to eliminate possibility of contact welding, contact bars of heavy coin silver, and two isolated circuits, one normally open, one normally closed. Water, oil, and dust-tight unit is available in three base and five lever styles. Made by **R. B. Denison Mfg. Co.**, 102 St. Clair Ave. N.W., Cleveland 13, Ohio.

▲ For more details circle **NED-453 F9** on enclosed inquiry slip ▲

NO. 1 SPECIALIST IN THE MARKING FIELD INDUSTRIAL'S Whippet



What Makes it First?... LOOK:

Versatility . . . automatically imprints cartons, bags, rolls, cans, containers and packages — as you need them during production line runs.
Low cost . . . "Whippet" sells low, seldom requires attention or maintenance.
Capacity . . . works non-stop at production lines speeds. No misses or overprints.
Simple Operation . . . attaches quickly and easily direct to conveyor line; non-oscillating friction head uses interchangeable rubber type for clear, legible impressions.
Saves . . . expensive hand stencilling, pre-printing, storage and inventory costs.

Proved practical and economical on almost any marking problem — in plants all over the country — "Whippet" is so simple, well designed and manufactured that experience proves they serve faithfully and profitably far beyond ordinary equipment. See how they can improve your operation.

Write for details and catalog today! Dept. NED

ime — INDUSTRIAL MARKING EQUIPMENT company, Inc.
655 BERRIMAN ST. BROOKLYN 8, N.Y. NI 9-3305

▲ For more details circle **NED-454 F9** on enclosed inquiry slip ▲

"SILVER" PAPER SHREDDERS FOR COST-CONSCIOUS EXECUTIVES

USED IN THOUSANDS OF PLANTS TO REDUCE PACKING COSTS

TRY THE "SILVER 13-C" FOR 10 DAYS—FREE!

Reduce your packing material costs as much as 40% by shredding your own paper. The "Silver 13-C's" fast, efficient, low-cost operation and many new mechanical improvements make it the fastest-selling Shredder in the industrial field. 7 other models available, too, depending on your needs and capacity desired. 10-day free trial in your own plant. Write for helpful data on how you can cut your packing costs . . . at the same time, dispose of excess paper materials.

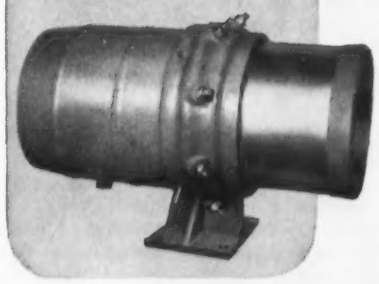
INDUSTRIAL SHREDDER & CUTTER CO.
107 Mill Street Salem, Ohio

▲ For more details circle **NED-455 F9** on enclosed inquiry slip ▲

important points about joints

- Yarway Gun-Pakt Joints are serviced *in the line under full steam pressure.*
- Costly shutdowns eliminated.
- Maintenance records show 1 manhour per year per joint.
- Fewer expansion joints needed per length of pipeline with Gun-Pakt.

YARWAY GUN-PAKT EXPANSION JOINTS



For new Yarway Expansion Joint Catalog EJ-1916 write YARNALL-WARING Co., 131 Mermaid Ave., Phila. 18, Pa.

go YARWAY with confidence

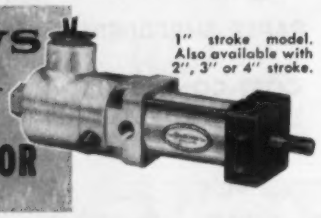
▲ For more details circle **NED-456 F9** on enclosed inquiry slip ▲

LOW COST SOLUTION TO A THOUSAND PRODUCTION PROBLEMS...

Bellows

CONTROLLED-AIR-POWERED

HAN-D-MOTOR



1" stroke model. Also available with 2", 3" or 4" stroke.

CLAMPING
FEEDING
POSITIONING
EJECTING
TRIGGERING

The cost-cutting applications of the rugged little Han-D-Motor are limited only by man's ingenuity.

Consisting of an air cylinder with integrally-mounted solenoid valve, the Han-D-Motor is a complete work unit which mounts in any position, can be controlled by switches, relays, timers and similar electrical devices, provides thrust approximately equal to air line pressure, can be synchronized with any related operation.

Get complete information on Bellows Han-D-Motors and how they can cut costs in your plant. 1312-B

Write for free Bulletin HD-20R. Address: The Bellows Co., Akron 9, Ohio, Dept. NED659.

OTHER INDUSTRIAL DIVISIONS OF IBEC: Sinclair-Collins Valve Co., Valvair, Akron, O. V. D. Anderson Co., Cleveland, Ohio

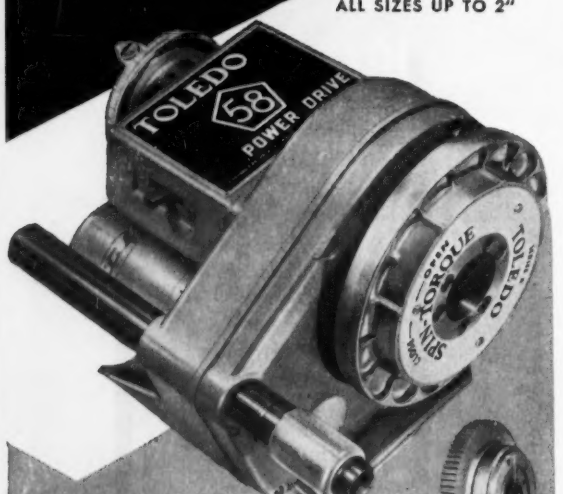
The Bellows Co.
DIVISION OF INTERNATIONAL BASIC ECONOMY CORPORATION (IBEC)
AKRON 9, OHIO

▲ For more details circle NED-457 F9 on enclosed inquiry slip ▲

The All New **TOLEDO** NO. 58 . . .

The Finest of all Power Drives

ALL SIZES UP TO 2"



WEIGHS ONLY 73 LBS.

For performance, dependability and quality, this rugged little workhorse can't be equaled. Its new Spin Torque Chuck virtually eliminates the chance of chips falling into moving parts . . . heavy-duty sealed gear train is factory-lubricated . . . powerful TOLEDO motor with rugged switch draws only 13 to 14 amps at full load . . . new centering device for instant, accurate centering . . . heavy-gauge steel base with center screw for bench or stand mounting in any position through 360° . . . many other outstanding TOLEDO features. Accessories include a lightweight folding stand with cast top and sturdy folding steel tray. Write for free literature today and see the new 58 at your supplier's soon.

Sold through your favorite distributor

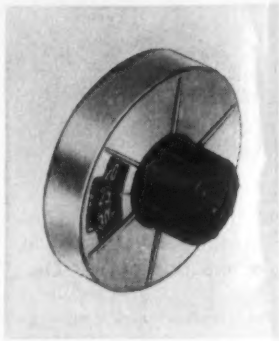
Quality Checked

TOLEDO®
BUILDERS OF THE WORLD'S FINEST PIPE TOOLS

THE TOLEDO PIPE THREADING MACHINE COMPANY TOLEDO 4, OHIO, U. S. A.

▲ For more details circle NED-458 F9 on enclosed inquiry slip ▲

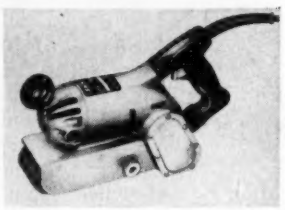
TURNS-COUNTING DIAL fits potentiometer, capacitor shafts



Lightweight plastic Model H5850 VerniDial, a turns-counting dial designed to fit shafts of potentiometers, capacitors, and valves, provides micrometer readout of their setting. Inner dial is graduated in hundredths of a turn, and outer dial accumulates the number of completed turns up to 20. Unit operates without backlash and can be driven from the shaft end. Vibrationproof lock fixes the reading. Colored cases and knobs are available. Made by **Howell Instrument Co.**, 3101 Trinity St., Ft. Worth 7, Tex.

▲ For more details circle NED-459 F9 on enclosed inquiry slip ▲

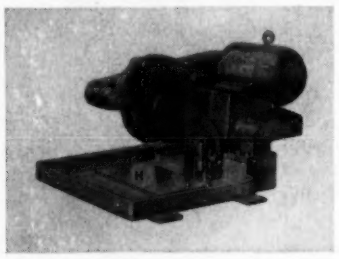
BELT SANDER 2¼-in. unit weighs 10½ lb



Surfacing wood, plastic, and compositions, paint removal, and leveling light weld beads on ferrous and nonferrous metals are uses for the Model 505 belt sander. The 2¼-in. wide belt can be changed in 5 sec. A contour grip rear handle with built-in trigger switch and large front handle facilitate use in any position. Price is $84.50. Made by **Skil Corp.**, 5033 Elston Ave., Chicago 30, Ill.

▲ For more details circle NED-460 F9 on enclosed inquiry slip ▲

ABRASIVE CUT-OFF MACHINES have 7½ or 10-hp motors



"Building block" construction of these abrasive cut-off machines adapts them to production or automation set-ups. Heads are equipped with either 7½ or 10-hp heavy-duty motor and are arranged to use 16 x 3/32 in. abrasive cut-off wheels. Photo shows head with splash pan, splash guard (W) and mounting pad (H) for mounting vise or holding fixture. Head is available without splash pan and pad. A precision vise for close tolerance work and air or hydraulic cylinders for automatic control are available. Made by **Cincinnati Electrical Tool Co.**, 364 Mt. Hope Ave., Cincinnati 4, Ohio.

▲ For more details circle NED-461 F9 on enclosed inquiry slip ▲

LOW COST INCINERATOR

BURNS
TRASH
SAFELY
OUTDOORS

Only $110.00 COMPLETE

NO INSTALLATION COST

Burn wrappings, sweepings, papers, cartons, packing, rags, food waste, safely outdoors. Scientific draft control ends fire hazards of flying ash, sparks, burning blowing papers. Burns damp, green, or dry refuse to fine ash in any weather. Minimizes smoke and smell, needs no watching. Safe for use 10' from buildings. Stands 52" high x 35" square at base. 10 bushel burning capacity. Complete with hinged hood, ash pan base and grate and cleanout door. Made of aluminized steel (molten aluminum bonded to steel) with replaceable inner steel panel construction for long life. Shipped assembled—weight 170 lbs. Only $110.00 F.O.B. Cleveland. Satisfaction guaranteed. Other sizes available.

Write for **FREE** *Folder*

ALSTO COMPANY
Dept. NE-14 4007 Detroit Ave. Cleveland 13, Ohio

▲ For more details circle NED-462 F9 on enclosed inquiry slip ▲

IN FASTENERS SOUTHERN IS

completeness

Completeness at Southern Screw starts with the placing of your order and continues through the shipment of your screws on free disposable pallets. Whether your screws are supplied from Southern Screw's 1,500,000,-000-piece stock or manufactured to your specifications, customers know that Southern Screw's **completeness** includes the consistent quality **and** service they have a right to expect. Let Southern demonstrate what **completeness** means on your next fastener requirements.

Machine Screws & Nuts - Tapping Screws - Wood Screws - Stove Bolts
Carriage Bolts - Dowel Screws - Hanger Bolts - Drive Screws

Manufacturing and Main Stock in Statesville, North Carolina
Warehouses: New York • Chicago Dallas • Los Angeles

Southern SCREW COMPANY STATESVILLE • NORTH CAROLINA

▲ For more details circle NED-463 F9 on enclosed inquiry slip ▲

STOP *that* NOISE NOISE NOISE NOISE NOISE NOISE

—from the discharge to atmosphere of air, steam and other gases, with a Burgess-Manning Snubber. They are available with such plus features as: spark arresting; air cleaning; heat recovery; and surge control.

Send us an outline of your problem for recommendations and literature.

Sound Engineering

BURGESS-MANNING COMPANY
Industrial Silencer Division
9227 Sovereign Row, Dallas 35, Texas
Libertyville, Illinois

▲ For more details circle NED-464 F9 on enclosed inquiry slip ▲

ONE RESPIRATOR STOPS ALL HAZARDS!

ALL DUSTS*
RADIOACTIVE DUSTS
MISTS* LIGHT SMOKE
ORGANIC VAPORS AND ALL DUSTS*
PAINT SPRAY ORGANIC VAPORS*
AMMONIA FUMES ACID GASES
INSECTICIDES†

C-200 Series Respirator by *Pulmosan*

- Single filter retainer cup
- Interchangeable filters
- New molded plastic clip-cap permits cartridges and pre-filters to be replaced independently
- Lightweight, easy to wear

*Approved by U.S. BUREAU OF MINES

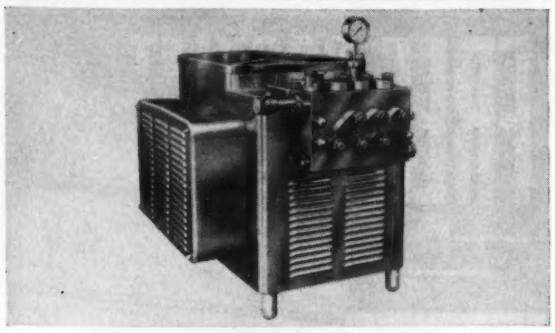
†Accepted by U.S. BUREAU OF ENTOMOLOGY AND PLANT QUARANTINE

Write for details:

PULMOSAN STOPS Accidents

Pulmosan SAFETY EQUIPMENT CORPORATION
644 Pacific Street, Brooklyn 17, N. Y., STerling 9-0200
1007 Washington Ave., St. Louis, Mo., CHestnut 1-9393

▲ For more details circle NED-465 F9 on enclosed inquiry slip ▲



gives more efficient homogenization—
new, higher operating capacities

Cherry-Burrell's new stainless steel SUPERHOMO HOMOGENIZERS

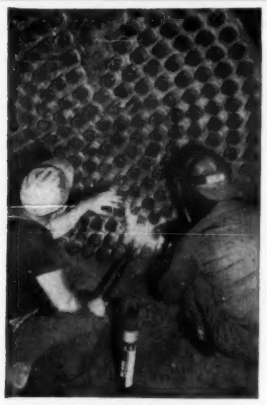
More efficient homogenization—High-speed shearing action homogenizer valve cuts globules down to equal size. Steady pumping pressure assures even particle dispersion. Prevents separation back to pre-homogenized state.

Low-cost operation—Low operating pressures cut down peak load demands, reduce wear on moving parts. Perforated valve caps are replaceable — absorb 98% of valve wear — save plug and seat regrinding.

New higher operating capacities—Cherry-Burrell's new all stainless steel Superhomos are available with capacities up to 6000 GPH. Get full information from a Cherry-Burrell Sales Engineer or write for bulletin G-562.

CHERRY-BURRELL CORPORATION
Cedar Rapids, Iowa

▲ For more details circle NED-466 F9 on enclosed inquiry slip ▲



Ni-Rod "55" Electrodes help give crack-free welds between scrubber's cast iron cones and carbon steel tubes at Aerotec Corp., Greenwich, Conn.

Weld cast iron to carbon steel ...no preheat ...no cracking with Ni-Rod "55" electrode

Joints were cracking up between cast iron cones and carbon steel tubes in these gas scrubbers . . . because electrodes of iron and mild steel gave brittle welds. Weldors switched to Ni-Rod "55"* Electrodes . . . and eliminated weld cracks! And weldors find preheating generally unnecessary.

You can get trouble-free welds between cast iron and mild steel in all your jobs with Ni-Rod "55" Electrode; available from most jobbers.

"Repair Cast Iron Parts Quickly and Easily," handy Inco booklet, is yours for the asking. *Registered trademark

The INTERNATIONAL NICKEL COMPANY, Inc.
69 Wall Street New York 5, N. Y.

Inco Welding Products
electrodes • wires • fluxes

▲ For more details circle NED-467 F9 on enclosed inquiry slip ▲

CURB those re-roping costs with Electroline WIRE ROPE FITTINGS

Easiest way to make wire rope *last longer*—and stop excessive costs of re-roping: use Electroline wire rope fittings.

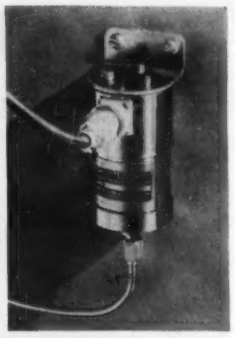
- **Tremendous holding power—Electroline's graduated compression grip *holds on "for keeps"*; damps vibration, insures against failures.**
- **Easy to install—simple job for unskilled workers with ordinary tools; no molten metal or acids.**
- **Reclaimable—use them again and again—for years.**
- **A fitting for every need—in the size you want.**

Send for the handy illustrated Electroline catalog and full information. A smart move toward sizable savings.

Electroline PRODUCTS
THE SUPERIOR SWITCHBOARD & DEVICES COMPANY
Box 590, Canton 1, Ohio

▲ For more details circle NED-468 F9 on enclosed inquiry slip ▲

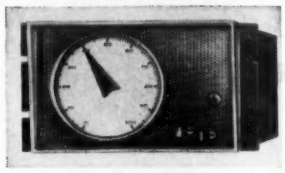
PRESSURE TRANSDUCER measures pressures up to 200 psi



Pressure on the proving ring of the Model 217 Teledyne low range pressure transducer sets up strains in the ring which are transmitted to strain gages. The linear electrical output signal, proportional to the pressure, can be used for precise control or measurement. Corrosive gas and liquid pressures up to 200 psi can be measured with a 1-millisecond response. High overload capacity is built in. Ambient temperature range is −150 to 250° F, repeatability is within 0.1 per cent, and resolution is infinite. Made by **Taber Instrument Corp.**, Section 16, 111 Goundry St., North Tonawanda, N. Y.

▲ For more details circle NED-469 F9 on enclosed inquiry slip ▲

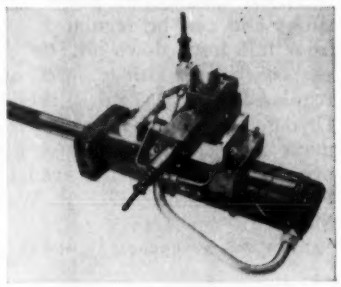
FLOW RATE INDICATOR is transistorized, servo driven



Compact transistorized and servo-driven Model 1321BF03 flow rate indicator weighs only 15 lb. It displays readings by means of a high intensity red pointer on a 4½-in. concentric dial calibrated for per cent or direct reading. Accuracy is ±2 per cent of full scale, and repeatability is ±1 per cent. Unit costs about one-quarter as much as previous models. Made by **Fischer & Porter Co.**, 133 Jacksonville Rd., Hatboro, Pa.

▲ For more details circle NED-470 F9 on enclosed inquiry slip ▲

ELECTRO-HYDRAULIC POSITIONERS systems from 1 to 500 hp offered



Speed of 8 fps on a 4-in. bore cylinder is possible with series of electro-hydraulic positioning systems available in a range of 1 to 500 hp. Systems are accurate to better than one part in 2000. Systems have electro-hydraulic actuators that can operate at pressures up to 3000 psi. Frequency response is flat up to 19 cps in large capacity systems, and up to 50 cps in smaller systems. Positioners are used to position rocket nozzles, aircraft guidance simulators, wind tunnel models, and deflecting walls. They are also used for large antenna drives and automatic turret positioning. Made by **CompuDyne Corp.**, 623 S. Warminster Rd., Hatboro, Pa.

▲ For more details circle NED-471 F9 on enclosed inquiry slip ▲

Fastest way to address cartons

Here's a way to address cartons that puts less modern methods to shame. Inexpensive, paper stencil is cut on a typewriter—separately or as by-product of shipping paper-work. It's then attached to small handprinter to imprint addresses directly on containers within "label frames" that have been pre-printed on the cartons by the carton manufacturer. Fast, clean, very inexpensive.

1 of 7 shipment addressing ideas described in new 16-page booklet. Send for free copy

Weber

Weber Marking Systems, Inc.
Dept. 25-F
Weber Industrial Park
Mount Prospect, Illinois

▲ For more details circle NED-472 F9 on enclosed inquiry slip ▲

KEEP MACHINES RUNNING ...reduce maintenance costs,

¾" Size Union Illustrated

for water, steam and air service!

Here is a compact, efficient rotating union—

- ★ LEAKPROOF
- ★ CORROSION PROOF
- ★ EASY TO SERVICE
- ★ VIRTUALLY FRICTIONLESS
- ★ PRECISION BUILT FOR LONGER LIFE
- ★ INTERCHANGEABLE with any other rotating union
- ★ VERSATILE—For Monoflow or Duoflow operation, available in ½", ¾", 1", 1¼" and 1½" sizes
- ★ MINIMUM TORQUE makes it ideal for high speed applications

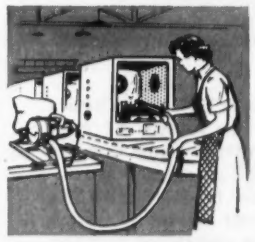
See how this dependable, new rotating joint can reduce inventory of replacement parts because of Deublin's standardization of sizes. Keep "shut downs" from wrecking your production schedules. Pays for itself many times over.

104 *Write today for full details and prices.*

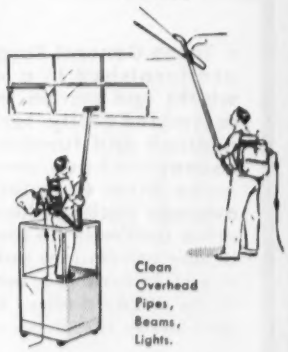
DEUBLIN COMPANY
1925 STANLEY ST., NORTHBROOK, ILLINOIS

▲ For more details circle NED-473 F9 on enclosed inquiry slip ▲

A NEW and VERSATILE method FOR FACTORY CLEANING



Tornado Pac-Vac is popular as a bench type vacuum or dust collector. Install it on a bench, hang it on a wall or machine and you have a powerful suction right at the source of dust, lint, dirt or chips.



Tornado offers you the handiest, portable vacuum or air source you've ever used. Pac-Vac is a powerful motor and impeller unit mounted on a comfortable pack frame. Use it as a vacuum cleaner for cleaning floors, bins, shelves, machines, fixtures, overhead pipes, beams or skylights.

By changing the hose position it becomes a handy tool for Air sweeping paper, boxes and debris from large areas.

The demountable motor unit converts into a powerful blower for motor and machinery maintenance.

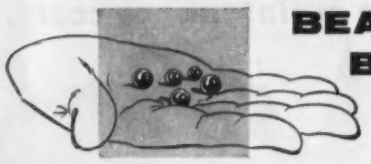
Buy several Pac-Vacs, keep them throughout your plant and watch "housekeeping" improve at once. Pac-Vac is available with ¾—1 or 1½ H.P. motor units and a wide assortment of attachments.

Write for Pac-Vac Bulletin No. 921 today. Your local Tornado Distributor will be glad to demonstrate Pac-Vac in your plant.

BREUER ELECTRIC MFG. CO.
5116 N. Ravenswood Avenue • Chicago 40, Illinois

▲ For more details circle NED-474 F9 on enclosed inquiry slip ▲

Abbott



BEARING BALLS

adaptable **INDUSTRY WIDE**

ABBOTT carbon steel bearing balls—high quality, deep hardened, scientifically tempered—perform reliably in a wide variety of applications. They are crush resistant and efficient under high load factors . . . shock resistant and free from stresses which cause distortion of sphericity and size. Typical uses range from toys, instruments and small tools to appliances, conveyors, and large computers.

And for fifty years Abbott consistently has offered wide choice, high quality, fast service.

Write for complete information.

a HALF century of WHOLE service to industry — ABBOTT

THE ABBOTT BALL COMPANY

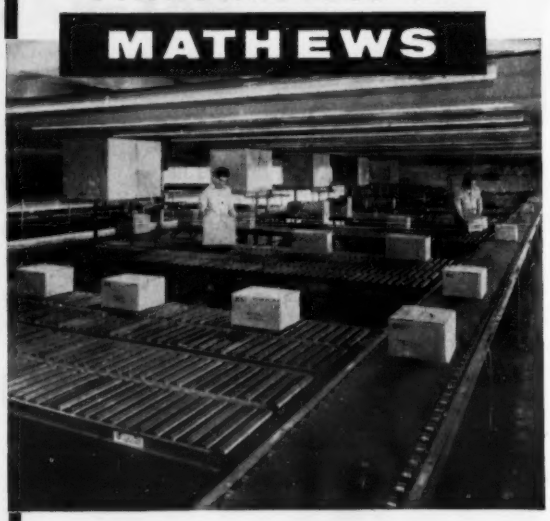
RAILROAD AVE., WEST HARTFORD 10, CONN.

For more details circle NED-475 F9 on enclosed inquiry slip

A COMPLETE LINE OF GENERAL PURPOSE BELT CONVEYERS

STANDARDIZED BY

MATHEWS



• These General Purpose Belt Conveyers are furnished in a wide range of belt widths and section lengths. They can be assembled easily, for all parts are standardized and furnished from stock. The conveyers have several features which make them especially practical for the average package handling problem. The drive unit may be located at the end, or at any convenient point beneath the conveyer. End roller assemblies, takeups, and three-pulley devices are all standardized and easily installed.

WRITE FOR BULLETIN G. P. 53 TODAY

MATHEWS CONVEYER COMPANY

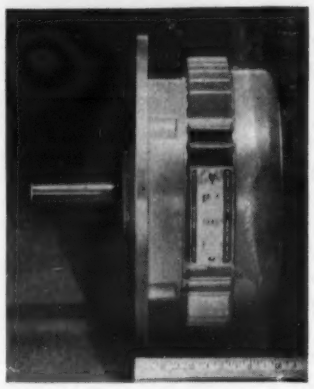
MATHEWS CONVEYER COMPANY . . . ELLWOOD CITY, PENNA.
MATHEWS CONVEYER COMPANY WEST COAST . SAN CARLOS, CALIF.
MATHEWS CONVEYER COMPANY, LTD. . PORT HOPE, ONTARIO

MATHEWS

Over Fifty Years of Leadership in Mechanized Handling

For more details circle NED-476 F9 on enclosed inquiry slip

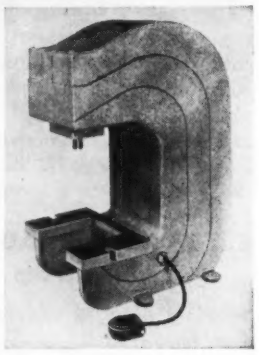
THIN ELECTRIC MOTOR for machine tools, fans, blowers



Up to 55 per cent shorter and 26 lb lighter than standard NEMA Type D flange motors of the same rating, the Thinline motor can be mounted in either a horizontal or vertical position. The design minimizes overhang in machine tools and allows more compact design of such equipment as ventilating fans and blowers. Motor meets NEMA Design B specifications for torques and starting current; standard NEMA frame diameters are maintained. Each rating is offered with a choice of three flanges. Motor is available in polyphase dripproof and enclosed construction, rated 1 to 5 hp at 1800 rpm. Made by **General Electric Co.**, Small Integral Motor Dept., 1 River Rd., Schenectady 5, N. Y.

For more details circle NED-477 F9 on enclosed inquiry slip

AIR-HYDRAULIC PRESSES in 1, 2½, and 6-ton capacities



An unusual air-on-hydraulic booster principle used in Air-Hydraulic presses provides full hydraulic power for press operation with shop air pressure for speed. These 1, 2½, and 6-ton presses can be used to form, flange, mark, rivet, broach, crimp, stake, or press-fit. Nonsurging hydraulic force is maintained throughout power stroke and can be regulated from full force down to 50 per cent of its rating. Speed of power stroke can be regulated from a creep to over 3000 strokes per hour. Dual safety hand lever, dual electric pushbutton, automatic reverse on pressure or distance, and full automatic cycle controls are available. Made by **Jackson Fluid Power Co.**, 16722 E. Warren Ave., Detroit 24, Mich.

For more details circle NED-478 F9 on enclosed inquiry slip

Heat Exchangers & Thermal Heaters

Alco Products, Inc.—Alcotwin longitudinal finned-tube heat exchangers offer high heat transfer rate and fluid flow, together with interchangeability within a plant. Together with thermal heaters, they are described in illustrated 12-page Bulletin FH-3-R. Isometric cut-away and exploded views are included, along with specifications and physical data.

For more details circle NED-479 F9 on enclosed inquiry slip

The Metron 3 in 1 HAND TACHOMETER...

The most **CONVENIENT** *most* **ACCURATE** *most* **READABLE**

WAY TO MEASURE SPEEDS OF YOUR MACHINES

3 sliding-scale ranges in 1 instrument!

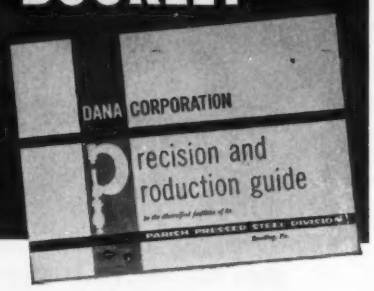
It's more *readable*—you see only one set of scale numbers at a time. It's more *dependable*—has a simpler operating principle. You switch quickly to any of 3 "sliding scale" ranges. You cannot damage by overspeeding. You get steady readings—electric cable prevents instrument vibration.

For full details write for bulletin 103

Metron INSTRUMENT COMPANY
436 Lincoln St., Denver 3, Colo.
DISTRICT OFFICES • NEW YORK • CHICAGO • CLEVELAND

For more details circle NED-480 F9 on enclosed inquiry slip

FREE BOOKLET



New Illustrated Brochure Shows Precision Metal-Working Facilities

Whatever your needs — special help to produce a problem part, or quantity production at close tolerances — we have the complete metal-working facilities to serve you. Whether the parts are steel or non-ferrous, simple or complex, or range from a heavy duty truck frame to a tiny bearing housing, we have the engineering know-how, production experience, and versatile equipment to turn out top quality on a mass production scale. As specialists in mass producing precision metal parts, we can cut your costs. Write or telephone, or send us a drawing of the part you want produced.

PARISH PRESSED STEEL
Division of Dana Corporation • Reading, Penna.

For more details circle NED-481 F9 on enclosed inquiry slip

NEW FROM KIDDE!

2½-gallon pressurized water

2½-gallon anti-freeze (loaded stream)

The easiest-to-operate portable fire extinguishers on the market today!

New design for water and loaded stream extinguishers. No inverting, no bumping, no valves to turn, no pins to pull. Just aim at fire and push the button.

Hose is stored safely out of the way. Wide-open handle insures fast action even in gloved hands. Dust-and-waterproof pressure gauges show at a glance whether the units are fully charged. They're the easiest-to-store, easiest-to-carry, easiest-to-operate portables on the market today! Approved by Underwriters' Laboratories. For more information, write to Kidde today.

Kidde

Walter Kidde & Company Inc.
624 Main St., Belleville, N. J.
Walter Kidde & Company of Canada Ltd.
Montreal—Toronto—Vancouver

For more details circle NED-482 F9 on enclosed inquiry slip

VERSATILE-

NEW PLUG-IN STEAM GENERATOR

Easily Converted to a Steam-Jet Cleaner!

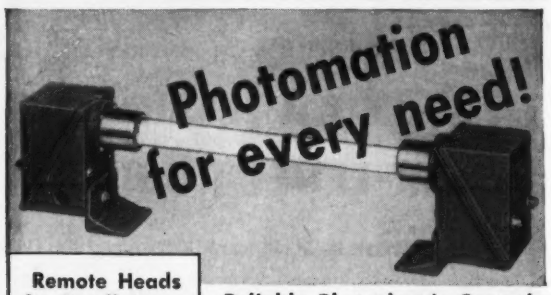
For plug-in operation on 110- and 220-volt circuits, the compact, ASME Code Series "R" SPEEDYLECTRIC steam generators are ideal for pilot plant and production processes requiring small volumes of high-pressure steam. This unit features safe, electrode heating with precise current control. Easily converts to a Steam Jet Cleaner. Write today for Bulletin SG-200.

Pantex MANUFACTURING CORPORATION

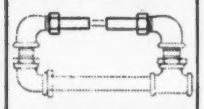
See our catalog in Sweet's Plant Engineering File

9-028 P. O. Box 660 Z, Pawtucket 4, Rhode Island

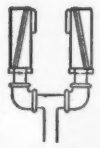
For more details circle NED-483 F9 on enclosed inquiry slip



Remote Heads for Small Space



E8-E8P3 Remote heads mounted together on ½" conduit. Also available with fixed focus pin point beam.



E1A-E1AP

Compact, rugged—easily positioned remote heads. Available with ¼" diameter straight beam—also fixed focus pin point beam.

Reliable Photoelectric Controls

for tension, jam-up, registration, illumination, liquid and material level – sorting, measuring, weighing, inspection–die-protection, smoke detection, packaging, processing.

Heavy Duty Industrial Photoelectric Equipment

Includes normal, high speed, ultra-sensitive and impulse actuated photoelectric controls – also latest tubeless photoelectric controls – with wide selection of light sources.

Catalogs describing above equipment and including diagrams of widely varied applications mailed promptly on request.

Send for your copy or tell us about your requirements.

AUTOTRON, INC.
Box 722DP Danville, Ill.
Representatives in principal cities

▲ For more details circle NED-484 F9 on enclosed inquiry slip ▲

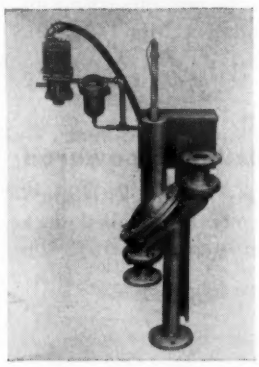
▲ For more details circle NED-485 F9 on enclosed inquiry slip ▲

VACUUM GAGE
wide range cold cathode units

Demand for means of measuring vacuum in the range of 9×10^{-3} through 1×10^{-7} mm and indications to 2×10^{-8} mm is met by this cold cathode vacuum gage. It incorporates a protective circuit for automatic shut-off when pressure rises above set limits. Portable model and rack mounted model, shown with cabinet, cost $248, each. Rack mounted model for standard 7 x 19-in. panels sells for $239. Made by **H. S. Martin & Son,** 1920 Greenleaf St., Evanston, Ill.

▲ For more details circle NED-487 F9 on enclosed inquiry slip ▲

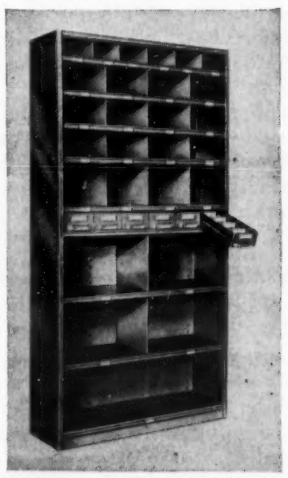
CONTROLLED VOLUME PUMP
handles slurries at 0 to 180 gph



Powered entirely by compressed air, this O.D.S. controlled volume pump will handle even corrosive and abrasive slurries containing up to 60 per cent solids at pressures to 90 psi. Made under Dorr-Oliver licensing, pump incorporates modifications to adapt it to metering service. Gentle diaphragm action minimizes particle degradation. By simple adjustment of electric valve timing mechanism, it is possible to vary flow from 0 to 180 gph. In addition, stroke length can be regulated by an electrical probe mechanism. Made by **Milton Roy Co.,** 1300 E. Mermaid Lane, Philadelphia 18, Pa.

▲ For more details circle NED-488 F9 on enclosed inquiry slip ▲

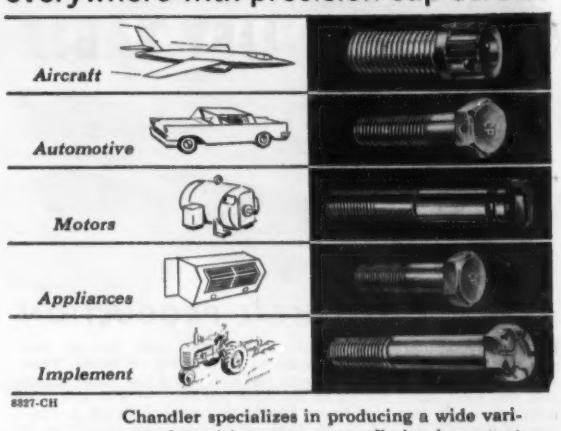
PARTS BINS
24 different models offered



Twenty-four different models of this all-steel parts bin make possible orderly indexed storage of an unlimited variety of parts. Bin dividers, drawer dividers, and shelves are all adjustable to make maximum use of available space. Units are finished in forest green baked enamel over an iron phosphate rust-inhibiting primer. Made by **Bay Products Inc.,** 1821 W. Cambria St., Philadelphia, Pa.

▲ For more details circle NED-489 F9 on enclosed inquiry slip ▲

CHANDLER serves industry everywhere with precision cap screws



8827-CH

Chandler specializes in producing a wide variety of precision cap screws offering important savings in assembly and production costs. Using modern equipment and skilled personnel, cold-headed bolts with threads rolled after heat treating are made with special heads or threads, drilled heads or shanks . . . plated or coated to meet your requirements . . . and ground to close tolerances. Write for information.

chandler
products corporation
1495 Chardon Road • Cleveland 17, Ohio

▲ For more details circle NED-490 F9 on enclosed inquiry slip ▲

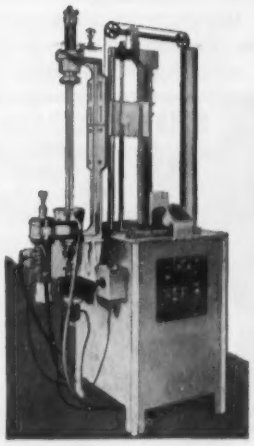
The Lepel line of induction heating equipment represents the most advanced thought in the field of electronics as well as the most practical and efficient source of heat yet developed for numerous industrial applications.
If you are interested in induction heating you are invited to send samples of the work with specifications. Our engineers will process and return the completed job with full data and recommendations without any cost or obligations.

FLOATING ZONE FIXTURE FOR METAL REFINING AND CRYSTAL GROWING

A new floating zone fixture for the production of ultra-high purity metals and semi-conductor materials. Purification or crystal growing is achieved by traversing a narrow molten zone along the length of the process bar while it is being supported vertically in vacuum or inert gas. Designed primarily for production purposes, Model HCP also provides great flexibility for laboratory studies.

Features

- A smooth, positive mechanical drive system with continuously variable up, down and rotational speeds, all independently controlled.
- An arrangement to rapidly center the process bar within a straight walled quartz tube supported between gas-tight, water-cooled end plates. Placement of the quartz tube is rather simple and adapters can be used to accomodate larger diameter tubes for larger process bars.
- Continuous water cooling for the outside of the quartz tube during operation.
- Assembly and dis-assemby of this system including removal of the completed process bar is simple and rapid.



Model HCP

Electronic Tube Generators from 1 kw to 100 kw.
Spark Gap Converters from 2 kw to 30 kw.

WRITE FOR THE NEW LEPEL CATALOG . . . 36 illustrated pages packed with valuable information.

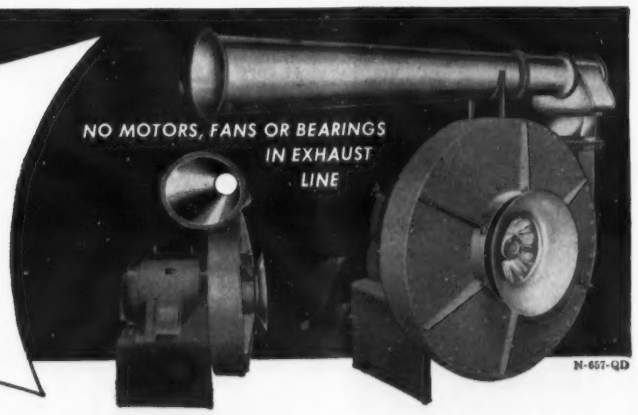
All Lepel equipment is certified to comply with the requirements of the Federal Communications Commission.

LEPEL HIGH FREQUENCY LABORATORIES, INC.
55th STREET and 37th AVENUE, WOODSIDE 77, NEW YORK CITY, N. Y.

▲ For more details circle NED-491 F9 on enclosed inquiry slip ▲

Now . . .

you can reduce bulk materials handling costs with *Quickdraft* high pressure exhausters

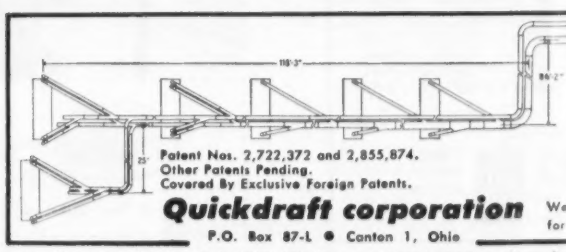


N-657-QD

FOR MOVING:
Cement, Sand, Iron Oxide, Wheat, Corn, Salt, Limestone, Castor Beans, Knots, Blocks, Paper, Wool, Cotton, Oats, Rags, Rubber, Vegetables, Coal (Powdered), Shavings, Cork, Sawdust . . . **and any other materials that can be moved by air!**

IMPORTANT NOTICE
For resisting abrasive action, Quickdraft units can be rubber lined. For withstanding corrosive gases, all Quickdraft units are available in standard acid resisting vitreous enamel, No. 316 Stainless Steel, rigid plastics (PVC), and with plastic and Fiberglas coatings.

Time and maintenance savings usually pay for Quickdraft high-pressure exhausters in 6 to 18 months on materials handling jobs. Because material does not pass through blower, maintenance is negligible. Downtime for cleaning and replacing fans, motors and bearings is eliminated. Quickdraft units are also ideal for exhausting paint spray, abrasives, corrosive gases, noxious fumes and high temperatures. For Quickdraft engineering data on materials handling, industrial exhausting, heating plant venting, write today!



TYPICAL EXAMPLE: Ideal for moving trim from paper, cellophane and plastic slitting machines. (Models range from 4 in. to 30 in. diameter — with 1/6 to 600 H.P. motors — with negative static pressures from 1/4 in. to 60 in. W.G.)

Patent Nos. 2,722,372 and 2,855,874.
Other Patents Pending.
Covered By Exclusive Foreign Patents.

Quickdraft corporation
P.O. Box 87-L • Canton 1, Ohio

Well known for power draft units for all types of heating plants.

▲ For more details circle NED-486 F9 on enclosed inquiry slip ▲

"Live" ROLLER TOP ON Weld-Bilt LIFT TABLE

SPEEDS SHEET METAL PRODUCTION

Load this Weld-Bilt Hydraulic Lift Table with two or four stacks of sheet steel, move it up to your press or brake. Then as your operator uses one stack, he just turns the hand crank, and the next stack moves to machine position — and you load another stack into position. Platform can be raised a fraction-of-an-inch at a time so that each sheet can be slid onto the press — no manual lifting. Lift is controlled by two-way foot pedal.

This Weld-Bilt "Live" Roller Lift Table is available in varying sizes and capacities to suit your needs. Just write, outlining your specific need. We'll be glad to suggest a profitable Weld-Bilt engineered adaptation that will save you production time and labor.

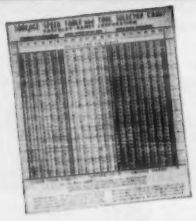
"Weld-Bilt" PRODUCTS

Weld-Bilt Vertical Floor to Floor Transportation Systems — Lift Trucks — Portable Elevators — Automatic Elevators.

WEST BEND EQUIPMENT CORP.
MATERIALS HANDLING ENGINEERS
311 WATER STREET, WEST BEND, WISCONSIN

▲ For more details circle NED-492 F9 on enclosed inquiry slip ▲

LOWER COST PER CUT



Ask for V-R SURFACE SPEED TABLE and TOOL SELECTOR CHART

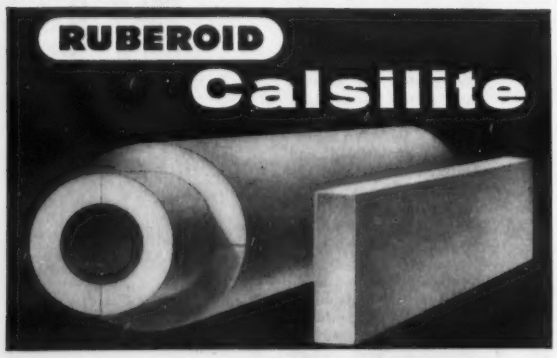
Lowering cutting costs is a matter of fitting the right V-R carbide to the particular job. V-R production engineers have worked with thousands of cutting problems and developed carbides and tools for greater efficiency in practically any application. Put this fund of cutting know-how to work lowering your costs. Write for complete information or contact your V-R Distributor.

C-716

V-R Vascoloy-Ramet corporation
884 Market Street • Waukegan, Ill.

▲ For more details circle NED-493 F9 on enclosed inquiry slip ▲

We do have one-layer Calsilite insulation for high temperature lines and equipment. Illustrated below is a two-layer application used in special installations.



Modern calcium silicate insulation for use on today's high temperature pipes and vessels. Available in various thicknesses of pipe coverings and blocks.

- Light weight, easy to cut and apply
- Insoluble in water, normal acids and alkalis
- Absorbs moisture without disintegrating
- Constant co-efficient of conductivity

For complete details, write:

The RUBEROID Co.
INDUSTRIAL PRODUCTS DIVISION
500 Fifth Ave., N. Y. 36, N. Y.
PIONEERS IN CALCIUM SILICATE INSULATION

▲ For more details circle NED-494 F9 on enclosed inquiry slip ▲

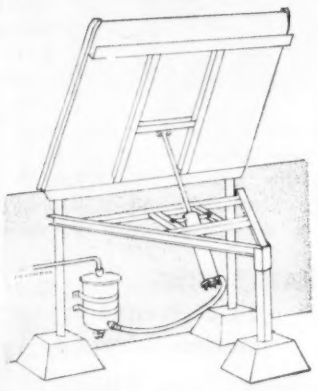
STATIC PROTECTIVE RELAY for industrial switchgear uses

Moving parts are eliminated in this transistorized static protective relay designed for industrial switchgear applications. Unit is one-third the size of its mechanical predecessors, and three single-phase relays will fit switchgear and switchboard panel cutout designed for one single-phase induction type. All components are mounted on printed circuit board. Relays are shockproof, impervious to moisture, and temperature stabilized. Installation and removal are simplified by plug arrangement. Indications are by means of neon lights. Relay adjusts itself instantaneously to prevailing load distribution. Made by **Allis-Chalmers Mfg. Co.**, 918 S. 70th St., Milwaukee 1, Wis.

▲ For more details circle NED-495 F9 on enclosed inquiry slip ▲

POWERED DOCKBOARD permanently installed, air powered

Loading and unloading of trailers and trucks is speeded with the Aero-Board permanently installed dockboard. Models for docks with permanently constructed bumpers and for flush docks without bumpers are available. Both are air powered, hydraulically operated, and require a minimum of piping. Dockboard is lowered by an up-down air valve. Truck doors can be opened with the Aero-Board in an out-of-the-way upright position. Board is attached flush with the dock with piano type continuous hinge. Size is 57 in. long and 60 in. wide. Of welded construction, it has a rated capacity of 10,500-lb wheel load or a 4000-lb capacity fork lift truck. Made by **Freightliner Corp.**, Box 3591, Portland 8, Oreg.

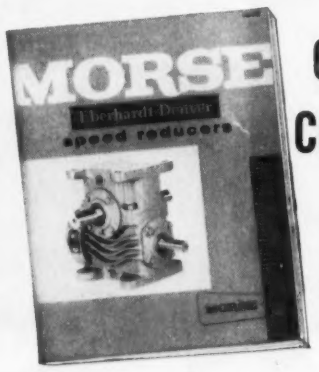


▲ For more details circle NED-496 F9 on enclosed inquiry slip ▲

Miniature Power Connectors

DeJur-Amsco Corp.—Illustrated technical Catalog 250 of 12 pages furnishes specifications, outline drawings, and general information on miniature rectangular electric power connectors. Series is available in a variety of contacts from 7 to 104, with optional polarizing screwlocks, aluminum hoods, and protective shells.

▲ For more details circle NED-497 F9 on enclosed inquiry slip ▲



GET YOUR COPY FREE!

New Morse Eberhardt-Denver Speed Reducer Catalog

This brand new easy-to-use Speed Reducer Catalog makes it easy to find just the unit for you! Morse offers a complete line of Eberhardt-Denver Speed Reducers with ranges all the way from .006 hp to 40 hp to encompass all major applications.

Comprehensive catalog gives full specifications, properties, selection information, features on all speed reducers —PoweRgear®, "L" Worm Gear, Conveyor Drives, Miter Boxes, Gearmotors, Helical Reducers

Send for your free copy. Specify Catalog ED-58. Morse Chain Company, Industrial Sales Dept. 19-69, Ithaca, New York. Export Sales: Borg-Warner International, Chicago 3, Illinois. In Canada: Morse Chain of Canada Ltd., Simcoe, Ontario.

MORSE MORSE BW *A BORG-WARNER INDUSTRY

*Trademark

▲ For more details circle NED-498 F9 on enclosed inquiry slip ▲

Work-O-Matic* Box and Stand for

UNIT LOAD HANDLING AN WORK-LEVEL POSITIONIN

Check these 7 Work-O-Matic featur

1. **WORK-O-MATIC DROP BOTTOM BOX.** Heavy gauge corruga steel construction. Square corners.
2. **CORNER STACKING ANGLES.** Safe tiering without shifting. Sa floor space.
3. **HINGED CHUTE BOTTOM.** As forks of truck are lowered, hin bottom opens and parts slide into tray.
4. **WORK POSITIONING STAND.** Receives box from back or si Safely and easily transported by lift truck.
5. **CONTROL GATE.** Vertical adjustment controls flow of parts into t
6. **WORK-LEVEL TRAY.** Reservoir feature eliminates work stoppage w changing boxes.
7. **INCLINED TRAY END.** Assures parts accessibility. Speeds job chan

In addition, Union Metal offers industry's broadest line of conventic type material handling containers. Write for complete catalog informat Address The Union Metal Manufacturing Company, Canton 5, O

*Registered Trade Mark

UNION METAL
Material Handling Equipment

See our live demonstration at the M.H.I. SHOW CLEVELAND June 9—12

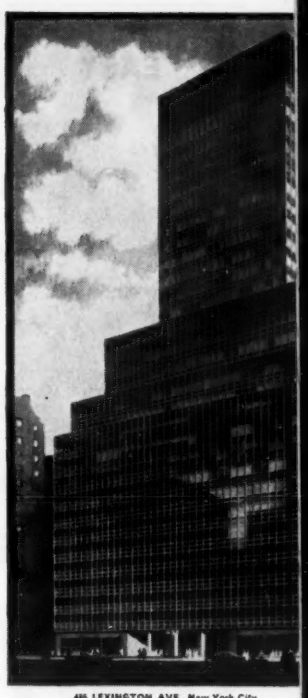
▲ For more details circle NED-49

Electrical Protection goes MODERN *with* BUSS Fuses *at* 485 Lexington Av. New York, N.Y.

In keeping with the modern trend the electrical protection for this new 30 story office building is BUSS Hi-Cap and FUSETRON dual-element fuses.

No other type of protective device can match fuses in providing the high interrupting capacity and dependability required for today's circuits.

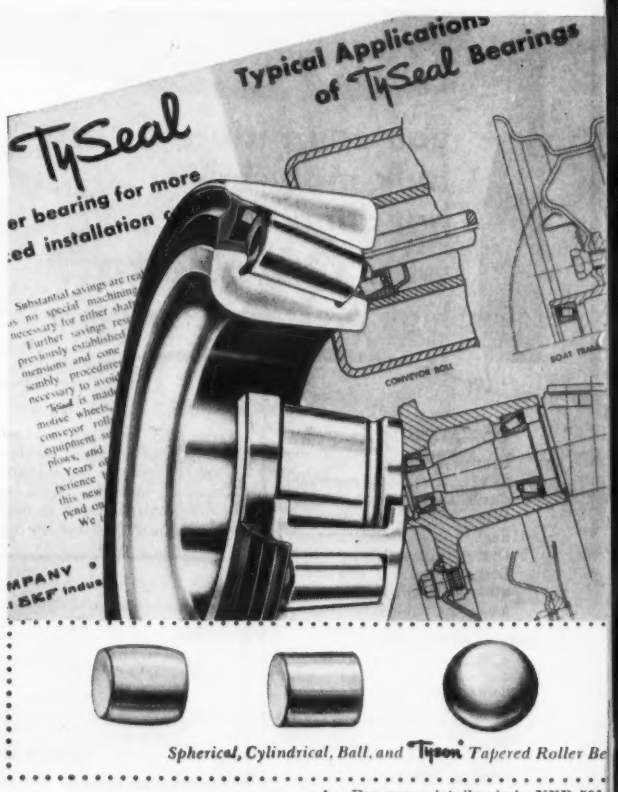
BUSS Hi-Cap fuses have an interrupting rating of 200,000 amperes rms symmetrical. FUSETRON fuses have an interrupting rating of 100,000 amperes rms symmetrical.



485 LEXINGTON AVE., New York City
URIS BROTHERS, *Owner and Builder*
ALFRED J. KLEINBERGER, *Electrical Engineer*

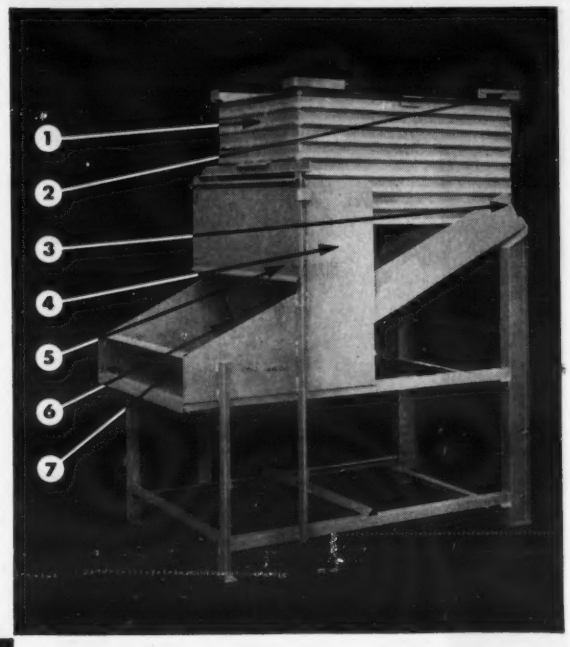
ANOTHER BUSS HI-CAP AND FUSETRON FUSE INSTALLATION —

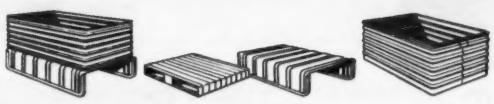
▲ For more details circle NED-500



Spherical, Cylindrical, Ball, and Tyson *Tapered Roller Be*

▲ For more details circle NED-501





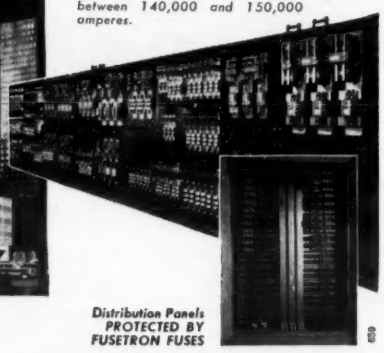
F9 on enclosed inquiry slip ▲

WITH FUSES SAFE PROTECTION REMAINS SAFE!

Unlike mechanically operated devices, a fuse has no hinges, pivots or contacts to stick or get out of order. Dust, fumes, corrosion or age cannot increase a fuse's capacity or lengthen its blowing time.

for more information
On BUSS Hi-Cap Fuses *write for bulletin HCS*
On FUSETRON dual-element Fuses *write for bulletin FIS*

Main Switch Board — BUSS Hi-Cap and FUSETRON fuses
Estimated available fault current is between 140,000 and 150,000 amperes.



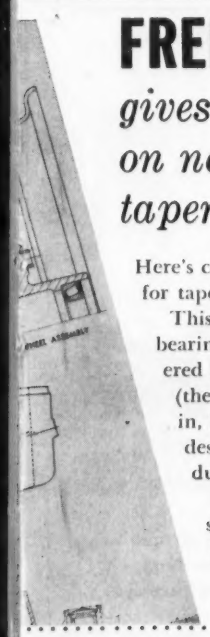
MERY ROTH & SONS, *Architect*
ISCHBACH & MOORE, *Electrical Contractor*

Distribution Panels PROTECTED BY FUSETRON FUSES

BUSSMANN MFG. DIVISION, McGraw-Edison Co. ST. LOUIS 7, MO.

F9 on enclosed inquiry slip ▲

FREE BOOKLET
gives full details on new seal for tapered roller bearings



Here's complete data on a new single-piece seal for tapered roller bearings—the SKF TySeal.

This double-lipped seal permits fitting sealed bearings into the same space as standard tapered bearings. Both lips contact the cup I.D. (the best sealing surface) to keep lubricants in, keep out dust and dirt. And its special design minimizes danger of seal damage during bearing installation.

But get full details. The FREE booklet shows sizes available, features, typical applications (drawn to full scale for easy tracing). Just send the inquiry card today. 7850

EVERY TYPE—EVERY USE
SKF®
SKF INDUSTRIES, INC., PHILADELPHIA 32, PA.

*rings

F9 on enclosed inquiry slip ▲ *REG. U. S. PAT. OFF.

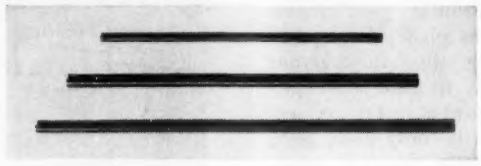
BUILDING HEAT CONTROLLER
fixed and adjustable ratio models

Low cost Weather - Flo outdoor reset type building heat controller can be applied to all air or water heating applications. Fixed and adjustable ratio models are offered with rigid, insertion type, or extended tubular form temperature measuring bulbs. Dialed adjustment permits raising or lowering the temperature cut-in point. Basic Weather-Flo unit effects on-off switching action and has a 10-amp capacity at 115 or 230 v. Modulating or proportioning models for positioning a valve or damper motor and a dual temperature model with individual setting for day and night temperatures are offered. Made by **Automatic Devices Co.**, 714 Hillgrove Ave., Western Springs, Ill.

▲ For more details circle NED-502 F9 on enclosed inquiry slip ▲

THREADED STAINLESS ROD
various lengths, diameters, threads

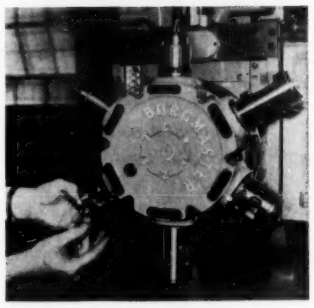
Type A9 stainless steel threaded stock is available for delivery in 12 to 24-in. lengths, diameters from No. 6 to ⅜ in., and with from 32 to 16 theads per inch. Available



from **PIC Design Corp.**, 477 Atlantic Ave., East Rockaway, L. I., N. Y.

▲ For more details circle NED-503 F9 on enclosed inquiry slip ▲

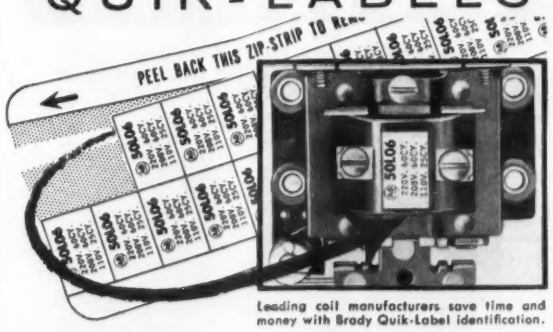
SMALL DRILL GUIDE
pressure foot adds rigidity



Strength and rigidity are added to small drills used on Burgmaster Turret drilling machines by use of pressure foot guides. Tools shown are mounted on a 2 BHT tape - controlled turret drill. Guides assist materially in holding drill locations to ±0.002 in. or better. Work is held down with spring tension, and drills are gripped short to reduce torsional twist. Drill bushing is built in, and perfect alignment is assured. Drills from No. 8 to ¼ in. can be used effectively in the foot guide and are suited for hand or automatic applications. Made by **Burg Tool Mfg. Co.**, 15001 S. Figuera, Gardena, Calif.

▲ For more details circle NED-504 F9 on enclosed inquiry slip ▲

BRADY *Self-Sticking*
QUIK-LABELS®



Leading coil manufacturers save time and money with Brady Quik-Label identification.

ANY SIZE! ANY SHAPE! ANY COLOR!

- Special Labels, Markers, Seals, Signs . . . tailor-made to your specifications. Mounted on Blue-Streak® Dispenser Cards for fast, distortion-free application.
- Choose from 400 different self-sticking materials — including Vinyl, "Mylar*," Acetate films, Cellophane, Vinyl-Cloth, Glass Cloth, Aluminum Foil, and many more plastic films, cloths, papers and foils.
- Fast, low-cost marking; stick to metal, glass, wood or plastics. Write for Bulletin 132 giving complete details and case histories. Free Test Samples on request.

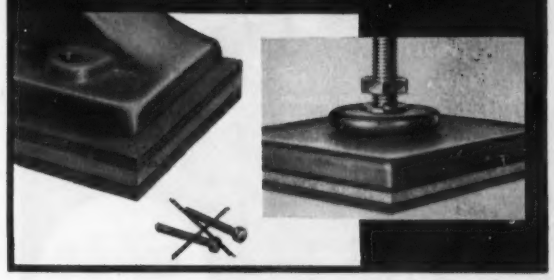
*Du Pont's Registered Trade Mark

W. H. BRADY CO. 769 W. Glendale Ave., Milwaukee 9, Wis.
Manufacturers of Quality Pressure Sensitive Tape Products.

Est. 1914 81

▲ For more details circle NED-505 F9 on enclosed inquiry slip ▲

Now! SAVE 30% AND MORE ON Machinery Installation



Unisorb pads and leveling mounts are the nearest thing to money in the bank every time you install a machine!

Here's How . . .
- No floor drilling, bolts, lag screws or grouting required
- Material and labor costs actually cut from 30% to 75%
- 80% saving in time
- Positive, safe and secure mountings but always mobile
- Eliminates up to 85% of transmitted vibration and noise. Cuts repairs, improves production. Machines work better, last longer.

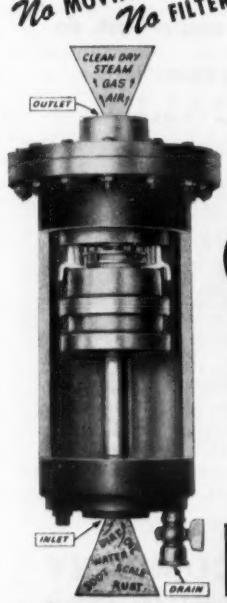
GET THESE SAVINGS on your next machinery installation. Send for new Unisorb Bulletin and details on Money-Back Trial Offer, NOW.

UNISORB Division of The FELTERS Company
224 South St., Boston 11, Massachusetts
FE9-15

▲ For more details circle NED-506 F9 on enclosed inquiry slip ▲

Deliver **CLEAN DRY AIR** *by this Exclusive Method*

No MOVING PARTS No FILTERS TO REPLACE No GUESSWORK



CMD TEXTITE AIR SEPARATORS

The accurately rated capacities of CMD Textite Air Separators assure ample C.F.M. volume to clean air and thoroughly dry it. Not mainliners; should be installed at or near point of use. Four sizes from 25 C.F.M. to 250 C.F.M. inclusive.

Send for Bulletin

CHICAGO MANUFACTURING & DISTRIBUTING CO.
1928 W. 46th St., Chicago 9, Ill.

▲ For more details circle NED-507 F9 on enclosed inquiry slip ▲

PHILLIPS RED HEAD
CONCRETE FASTENERS

No expensive concrete drills or explosive charges needed. Install by hand or impact hammer. Won't pull out, rust out, melt out or shake loose. Holds more weight than any other; permanent as the concrete itself because of dovetail expansion principle. Write today for a catalog and your *free sample*

THE GENUINE PHILLIPS HAS A RED HEAD

Job site demonstration can be arranged.

PHILLIPS DRILL COMPANY • MICHIGAN CITY 2, INDIANA

▲ For more details circle NED-508 F9 on enclosed inquiry slip ▲

WALK-IN OVENS

Shipped set up—merely uncrate and connect

Model B-3 Electric, Gas, Oil or Steam Walk-In Oven

Thorough factory testing assures immediate operation. No installation crews or plant tie-up.

- High velocity recirculating blowers
- Greater heat input
- Adjustable louvres for balanced airflow
- Superior heat seals

These efficient, rugged walk-in ovens incorporate the latest convenience features and safety devices.

Six Standard Models

- Work space from 95 to 240 cubic feet
- Temperature ranges: Standard to 650° F. Special to 1250° F.
- Factory Mutual approved electronic combustion safety devices
- Indicating temperature controller
- Factory tested and calibrated

Other ovens from $121.50 up, including a complete line of laboratory, bench, cabinet and custom-built units.

Write for literature to select the right oven for your application

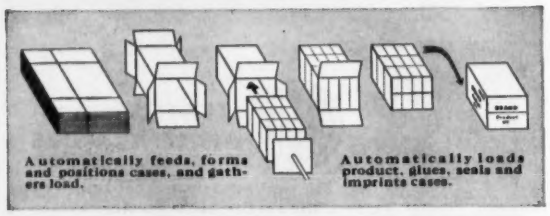
Specialists in Heat Process Equipment

GRIEVE-HENDRY COMPANY, Inc.
1408 West Carroll Avenue, Chicago 7, Illinois

For more details circle NED-509 F9 on enclosed inquiry slip

Take the HANDS out of PRODUCT HANDLING

Let Packomatic equipment do any or all your casing operations AUTOMATICALLY



FOR CASING ROUND, SQUARE, RECTANGULAR OR FREE-FORM PACKAGES OF VIRTUALLY ANY SIZE. If you employ even one person per shift to hand-form cases, or to hand-pack, hand-seal, or hand-imprint them, then it can pay you to install Packomatic equipment. Write, phone or wire for facts on how to reduce your casing costs.

J. L. FERGUSON COMPANY
Box 1226, Phone 6-6275, Joliet 12, Illinois

For more details circle NED-510 F9 on enclosed inquiry slip

FOR THOSE HARD-TO-REACH TURNINGS

NYE CHAIN WRENCH

SAVES TIME • EASES WORK

Perfect for work against walls, in corners, on parallel pipes. Needs less than ⅝" clearance. Takes positive grip. Solidly built. Forged alloy handle. Saves a lot of time on the job. Order today.

TURNS ANY SHAPE

Round, square, hexagonal or octagonal, bars, pipe, conduit. No crushing.

Ratchet action takes each new bite without removing wrench from work.

NYE TOOL COMPANY
4126 WEST FULLERTON AVE., CHICAGO 39, ILLINOIS

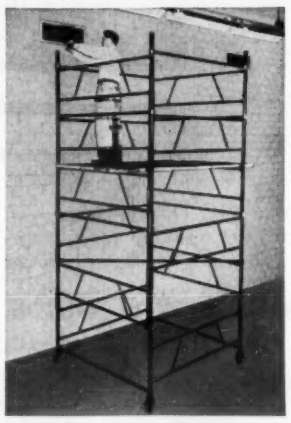
For more details circle NED-511 F9 on enclosed inquiry slip

HIGH SHEAR TAP
has uninterrupted chip ejection

Stringy and high temperature alloys such as stainless steels, boron steels, Monel, Hastelloy B, Inconel X, and ductile steels can be tapped to close tolerances with the Hy-Spiral tap. A 52-degree spiral which provides high shear at the cutting point and uninterrupted chip ejection, the 10-12 degree face hook, and a 2 to 2½ thread chamfer combine to produce smooth, accurate threads in difficult-to-machine materials. Long-life tap is also suited for vertical blind tapping of aluminum and zinc die castings. Both National Coarse and National Fine pitches are offered in machine screw sizes from 3 to 12 and fractional sizes from ¼ to ½ in. with 1/16-in. increments. Made by **DoALL Co.**, 254 N. Laurel Ave., Des Plaines, Ill.

For more details circle NED-512 F9 on enclosed inquiry slip

TUBULAR STEEL SCAFFOLD
assembled from one basic part



Lightweight, easy-to-handle tubular steel frame sections of Self-Lock scaffolding slip-fit together quickly to form self-aligning towers. Frame sections, the only basic part, will pass through openings as small as a manhole for erecting scaffolding in inaccessible places or inside large equipment. Towers are erected without tools or fasteners in 2-ft increments for wiring, painting, patching, replacing broken windows, and other operations. Frame sections are made in 2, 5, and 7-ft lengths and 2 and 3-ft heights. Casters, baseplates, screw jacks, and other accessories are available. Made by **Vega Industries, Inc.**, 1200 E. Brighton Ave., Syracuse, N. Y.

For more details circle NED-513 F9 on enclosed inquiry slip

Using Corrugated Packaging Properly

West Virginia Pulp & Paper Co., Hinde & Dauch Div.—Two sections in 32-page well-illustrated booklet "How To Pack It" are devoted to basic corrugated box designs and to special box designs. First provides a "starting point" for determining which box style is best suited for individual products. Second illustrates and describes 56 box designs developed for specific product and marketing requirements.

For more details circle NED-514 F9 on enclosed inquiry slip

Quality cans **EAGLE SAFETY CANS**

The approved *safe* way to handle flammable liquids • Listed by Underwriters Laboratories • Approved by Factory Mutual • Uncommonly rugged for hard use • 'The Complete Line'

STYLE I STORAGE CAN

1 qt., 2 qt., 1 gal. sizes with trigger-grip handle . . . 2½ gal., 5 gal. sizes with free-swing handle . . . valve operated by handle gives positive pouring control . . . no waste, no splash, no spill . . . strong quality construction.

STYLE II FILLER-DISPENSER CAN

2½ gal., 5 gal. sizes with free-swing handle . . . flexible spout for easy pouring . . . body and breast each seamless drawn from heavy 24-gauge steel . . . steel hoop reinforces bottom . . . fire screens in pour spout and filler opening for double fire protection.

ORDER FROM YOUR SUPPLIER

Write for free catalog showing Complete Eagle Line

EAGLE MANUFACTURING COMPANY
Wellsburg, West Virginia
Serving Industry Since 1894

For more details circle NED-515 F9 on enclosed inquiry slip

seal or connect any of these openings IN 2 SECONDS!

WITH "Quick-Seal" TEST PLUGS AND FILLING CONNECTORS

"Quick-Seal" Test Plugs and Connectors reduce pressure testing costs by sealing virtually any opening in 2 seconds or less. "Quick-Seal" connections are safe, sure, positive. Openings may be finished or unfinished—shallow or deep, in any material. "Quick-Seal" Plugs and Connectors are widely used by manufacturers of tanks, boilers, drums, castings, radiators, etc—any product or component requiring pressure testing. Rugged, sturdy construction stands up to toughest service. Send us your pressure sealing or pressure connecting problem for a quick, low cost answer.

Write for Pressure Testing Manual today.

mechanical products

MECHANICAL PRODUCTS CORPORATION
1724 WEST HUBBARD STREET, CHICAGO 22, ILLINOIS

For more details circle NED-516 F9 on enclosed inquiry slip

interchangeable with all standard JIC cylinders

CHECK THESE 10 POINTS OF T-J SUPERIORITY

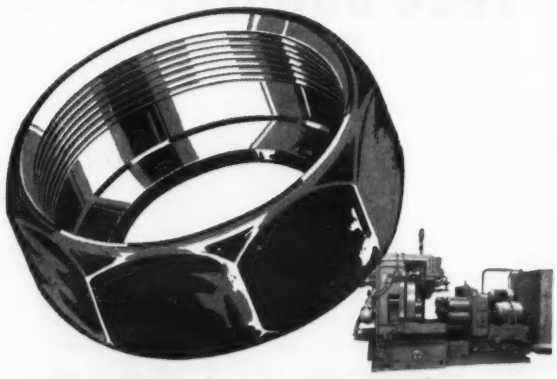
1. One Piece Piston
2. Hard Chrome Cylinder Bore and Piston Rods
3. High Tensile Steel Tie-Rods
4. Cushion Adjusting Screw, Externally Adjustable
5. New Super-Cushion for air, or Self-Aligning Master Seal for Oil (T-J Patents)
6. Solid Steel Heads and Mounting Plates Standard all Models
7. Port Design Allows Minimum Pressure Drop on Inlet or Outlet
8. Chevron Type, Self-Adjusting Rod Packing
9. Piloted Packing Gland—Absolute Alignment
10. Piston Rod, Extra Strong—Polished and Chrome Plated for Efficiency and Protection

Write today to Tomkins-Johnson, Jackson, Michigan, for Bulletin #SQ 10-58 and complete details.

T-J TOMKINS-JOHNSON

For more details circle NED-517 F9 on enclosed inquiry slip

an example of Automatic Production by Greenlee . . .



700 malleable iron pipe fittings an hour . . .

on this Greenlee automatic indexing machine designed and built for this job.

STATION 1—automatic load—4 at a time
STATION 2—bore and rough counter-bore
STATION 3—finish counter-bore and chamfer
STATION 4—tap
STATION 5—automatic unload—4 at a time

Let a Greenlee representative show you the modern approach to automatic production.

GREENLEE BROS. & CO. 1785 MASON AVE. ROCKFORD, ILLINOIS

For more details circle NED-518 F9 on enclosed inquiry slip

UNBRAKO self-locking socket screws

won't work loose, improve your product reliability

*T.M. Reg. U.S. Pat. Off., The Nylok Corporation

An UNBRAKO socket screw with Nylok* is a reliable, self-locking fastener that stays tight regardless of the vibration encountered. Because it won't work loose, it materially increases product reliability. A nylon pellet, permanently fixed in the threaded section of the screw, is the locking medium. Its springlike wedging action grips threads firmly and sets up a counterthrust which causes a tight metal-to-metal engagement of the mating threads. Locking is positive whether the screw is seated or not.

UNBRAKO socket screws with Nylok are stocked by authorized SPS industrial distributors. Ask the one nearest you for complete listings. Or write direct for Bulletin 2196.

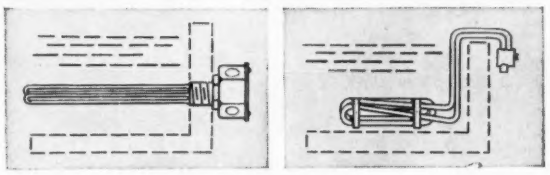
INDUSTRIAL FASTENER Division SPS

JENKINTOWN 24, PENNSYLVANIA

▲ For more details circle NED-519 F9 on enclosed inquiry slip ▲

For fast heat, For clean heat . . .

Build heat into your product or process with General Electric immersion heaters



For heating liquids in your processing equipment or in your products no other method offers the cleanliness, speed and selectivity made possible by immersion heaters from General Electric.

You get all the heat: Because these heaters can be placed right in the liquid you get maximum efficiency. Heat losses to surrounding atmosphere are reduced. Working conditions are more comfortable.

Fire hazards reduced: Safer, quicker electric heat eliminates danger of open flame, inconvenience of smoke and fumes.

You get accurate control: To give you quick heat regulation for changing conditions, precise thermostat controls are available.

FREE BULLETINS

For more information, write Section 723-30, General Electric Company, Schenectady 5, N. Y., and ask for GEA-6305, HEATING WATER AND PLATING BATHS; GEA-6306, HEATING OIL; and GEC-1005 CATALOG OF GENERAL ELECTRIC HEATERS AND DEVICES.

GENERAL ELECTRIC

▲ For more details circle NED-520 F9 on enclosed inquiry slip ▲

Easy to operate. Extremely durable. Simple to maintain.

For your files: Complete specifications and price list for all models. SEND INQUIRY CARD TODAY.

"CADILLAC" LOW-COST WINCH HOIST

Every Hoist PRE-TESTED for MAXIMUM PERFORMANCE MAXIMUM SAFETY

Check these features:

- Precision-built of certified materials.
- High-strength, corrosion-resistant TENZALOY castings. Tensile strength 32,000.
- Light weight and compact.
- Stainless steel springs and shafts.
- Manganese bronze cam reduces pawl wear.
- "Safety-valve" handle breaks at severe overload.
- Drop-forged, heat-treated hooks. Safety hooks available.
- Equipped with galvanized, pre-formed aircraft wire rope.
- Tested to full 50% overload.
- Full year guarantee against defective workmanship and materials.

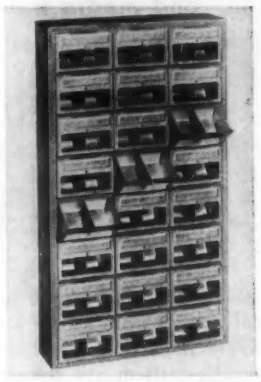
Model 202WX 1½-ton capacity equipped with 20' of 3/16" galvanized wire rope. Lifting ratio approx. 30 to 1. Weight 10 lbs. Min. distance between hooks 25". 20' single, 10' double line. Models from ½ to 2 tons cap. Prices: $29.50 and up.

ALUMINUM PRODUCTS, INC.

P.O. BOX 1462-N FORT LAUDERDALE, FLORIDA

▲ For more details circle NED-521 F9 on enclosed inquiry slip ▲

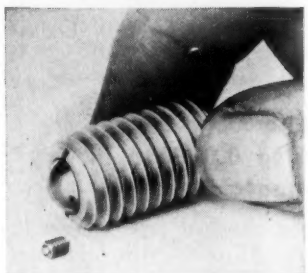
PARTS STORAGE CABINET with 6, 12, or 24 bins



High strength glass-fronted bins are featured in the UC all-metal storage cabinet for small parts, components, subassemblies, tools, or fasteners. Cabinet is offered with 6, 12, or 24 bins which are spillproof, yet open at a slight touch. Each bin has a removable divider, and space above glass fronts accommodates labels. Slotted backs permit wall mounting. The 24-bin model measures 29 x 15⅜ x 4 in. Bins measure 3½ x 4½ x 3 in. Prices range from $5 to $18.95. Made by **Bowers Mfg. Co.**, 105 Michigan St., Toledo 2, Ohio.

▲ For more details circle NED-522 F9 on enclosed inquiry slip ▲

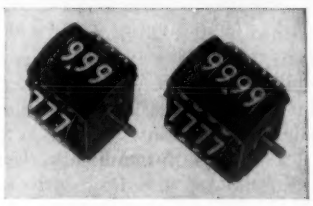
BALL PLUNGERS two miniature sizes added to line



Added to line of ball plungers are miniature sizes 10-32 and ¼-20, particularly useful in instrumentation, electronics, and missile work where small size and light weight are required. Standard balls are Type 440 hardened stainless steel, although high carbon chrome alloy, K-Monel, aluminum, tobin bronze, carbon steel, glass, nylon, carbide, and copper balls can be furnished. Bodies can be black oxide, cadmium, or gold plated. Made by **Vlier Engineering Corp.**, 8900 Santa Monica Blvd., Los Angeles 46, Calif.

▲ For more details circle NED-523 F9 on enclosed inquiry slip ▲

INTERNAL PINION COUNTER indicates to 9999, returns to 0000



Digital displays on a variety of vertical scale indicating panels are applications of the Model 10322 miniature internal pinion counter. It indicates from 0000 to 9999 in one-unit increments and returns to 0000. Unit has a fixed shade and a decimal point to facilitate reading. It is suited for continuous use to 300 rpm or intermittent use to 600 rpm. Entire unit is corrosion resistant and is equipped with stainless steel ball bearings. Operating range is −55 to 100° C. Made by **Bowmar Instrument Corp.**, 8000 Bluffton Rd., Ft. Wayne, Ind.

▲ For more details circle NED-524 F9 on enclosed inquiry slip ▲

P...D...Q...!
H-R IDLERS FEATURE PRICE, DELIVERY, QUALITY

Priced competitively . . . no extra charge for H-R "know-how"!

Delivered from local stocks . . . warehoused nationwide for immediate replacement!

Quality design and workmanship . . . one-shot lubrication—one application of the grease gun fills *all* the bearings in an idler!

Triple grease seal—redesigned to increase maximum service life!

Welded-in pulley heads using latest production techniques!

For information contact your local H-R representative, or Hewitt-Robins, Stamford, Connecticut. Ask for Bulletin 6-14.

HEWITT-ROBINS

CONVEYOR BELTING AND IDLERS . . . POWER TRANSMISSION DRIVES
INDUSTRIAL HOSE . . . VIBRATING CONVEYORS, SCREENS & SHAKEOUTS

▲ For more details circle NED-525 F9 on enclosed inquiry slip ▲

New Westinghouse FLOREG Valves for accurate flow control of gases and liquids

This new flow regulating valve accurately controls the rate at which a gas or liquid can flow in one direction through the circuit, yet allows free flow in the opposite direction. It can be used to time, to sequence or to co-ordinate the operation of the circuit.

The new valve has high capacity, is easy to adjust, self-cleaning, noiseless, lightweight, and compact. It is of top quality—made with aluminum, stainless steel, and plated steel parts to resist corrosion. Seals are oil resistant.

Working pressures range from 250 psi maximum pneumatic to 500 or 2000 psi maximum hydraulic. Temperatures: —40° to 200° F. Sizes: ¼", ⅜" and ½" N.P.T. **Prices start at $4.00.**

See the yellow pages under Cylinders for the name of your local distributor.

WESTINGHOUSE AIR BRAKE COMPANY
INDUSTRIAL PRODUCTS DIVISION

WILMERDING, PENNSYLVANIA — EMERYVILLE, CALIFORNIA

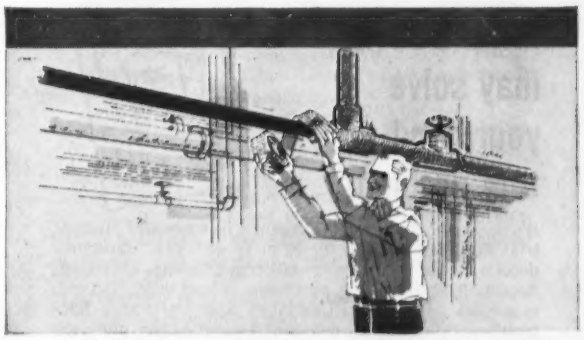
▲ For more details circle NED-526 F9 on enclosed inquiry slip ▲

END ALL DRIP AND RUST PROBLEMS IN YOUR PLANT THESE TWO PROVEN WAYS!

Industrial plants know Mortell products offer more positive protection than any other drip-and-rust preventive. Maintenance men know that paints or compounds of paint and fish oil provide little or no permanent protection. Rust-inhibiting NoDrip Plastic Coating is a moisture-proof insulation that *does* stop condensation . . . forms a seamless jacket . . . *does* stop corrosion. NoDrip Tape, with its triple insulating barrier, is equally dependable.

For Tanks, Large Pipes, Air Ducts, Metal Equipment, Walls, Ceilings, Permanently End Condensation Drip, Rust and Corrosion With NoDRIP PLASTIC COATING

The heavy consistency of NoDrip outlasts many coats of paint or ordinary rust-preventives. Permanently insulates and protects. Applies easily with trowel, brush or special spray. Non-toxic, odorless and non-flammable. Resists acid, alkali, brine solutions or vapors. Available in 1, 5 and 55 gallon drums.



For Smaller Pipes or Tubing, Permanently End Condensation Drip, Rust and Corrosion With NoDRIP TAPE

An easy-to-use, wrap-around pipe covering, perfectly pliable, cork-filled, completely self-adhering. Forms an air-tight, 100% vapor- and moisture-proof jacket. Fits snugly even around tees, unions, angles, valves. Cuts maintenance costs—makes out-of-the-way storage areas useable—ends slip and slide floor hazards. No need for vapor seals, brads, fasteners or tools of any kind.

At all leading hardware, mill supply and plumbing jobbers. For complete information and technical handbook, write

Mortell COMPANY
526 Burch Street · Kankakee, Illinois

▲ For more details circle NED-527 F9 on enclosed inquiry slip ▲

Bench Tops

LAMINATED HARD MAPLE

Steel bench bases, legs and drawers available for use with Tolco Tops. Write for complete illustrations and prices.

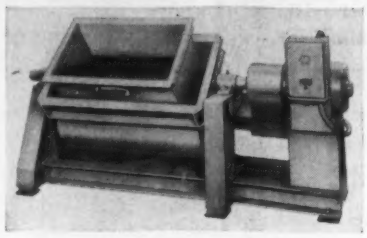
ESTABLISHED 1894

THE TOLERTON COMPANY

265 N. FREEDOM AVE. · ALLIANCE, OHIO

For more details circle **NED-528 F9** on enclosed inquiry slip

VIBRATORY FINISHING MACHINE
entire 5-cu ft load of parts and media is vibrated together



Scrubbing action created by vibrating the entire 5-cu ft load of parts and media enables Model VT-75 Vibrasheen vibratory finisher to quickly remove heavy burrs or scale. Machine is also suited for fine finishing of delicate parts and for removing internal burrs in hard-to-reach crevices. Large parts can be finished by suspending them on fixtures in the constantly moving chip mass.

Vibrating amplitude is adjustable to seven settings from 1/64 to ¼ in. at frequency of 1800 vibrations per minute. Variable frequency units are also obtainable. Power is furnished by 7½-hp 1800-rpm totally-enclosed drive motor. Container is lined with ½-in. bonded neoprene and measures 31 x 17 x 19½ in. It will pivot 120 degrees to dump load into hoist pans. Made by **King-Seeley Corp.**, Almco, Queen Products Div., Albert Lea, Minn.

For more details circle **NED-531 F9** on enclosed inquiry slip

Conveying Corrosive Chemicals?

SOLVE THEM WITH
Aeroquip Flexible Hose of Teflon
and Reusable "*super gem*" Fittings*

Chemicals, solvents and other fluids which deteriorate ordinary hose or tubing can be handled safely with Aeroquip 2802 Hose of Teflon. It is chemically inert and stable, has excellent lubricity, withstands temperatures from -65°F. to 500°F. Long, trouble-free performance, even under constant hose line flexing is assured. Corrosion-resistant "*super-gem*" Fittings are reusable. Call your Aeroquip Distributor, or write for IEB-40 for details.

*U.S. Patent Nos. 2,833,567 and 2,731,279.
"*super gem*" is an Aeroquip Trademark
Teflon is DuPont's trade name for its tetrafluoroethylene resin

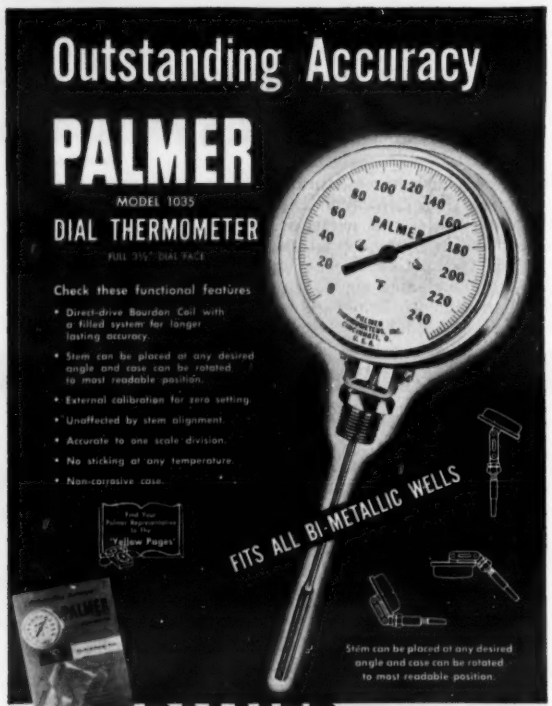
Aeroquip

AEROQUIP CORPORATION, JACKSON, MICHIGAN
INDUSTRIAL DIVISION, VAN WERT, OHIO. WESTERN DIVISION, BURBANK, CALIFORNIA
AEROQUIP (CANADA) LTD., TORONTO 19, ONTARIO

For more details circle **NED-534 F9** on enclosed inquiry slip

Outstanding Accuracy

PALMER
MODEL 1035
DIAL THERMOMETER



Check these functional features
- Direct-drive Bourdon Coil with a filled system for longer lasting accuracy.
- Stem can be placed at any desired angle and case can be rotated to most readable position.
- External calibration for zero setting.
- Unaffected by stem alignment.
- Accurate to one scale division.
- No sticking at any temperature.
- Non-corrosive case.

Find Your Palmer Representative in the "Yellow Pages"

Stem can be placed at any desired angle and case can be rotated to most readable position.

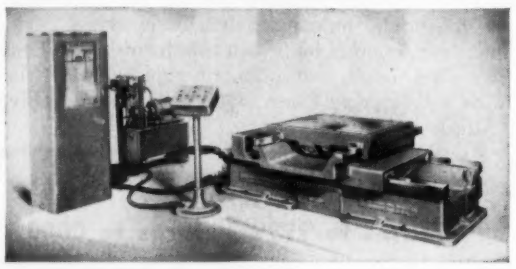
Write for Free Bulletin 1035 for complete description and prices.

PALMER THERMOMETERS, INC.
Mfrs. of Industrial Laboratory, Recording and Dial Thermometers
2515 Norwood Ave., Cincinnati 12, O.

For more details circle **NED-529 F9** on enclosed inquiry slip

POSITIONING TABLE
tape controlled to 0.000050 in. accuracy in repeatability

Numerically controlled by a punched tape housed in a sealed, pressurized cabinet, this positioning table can support heavy workpieces, positioning them anywhere

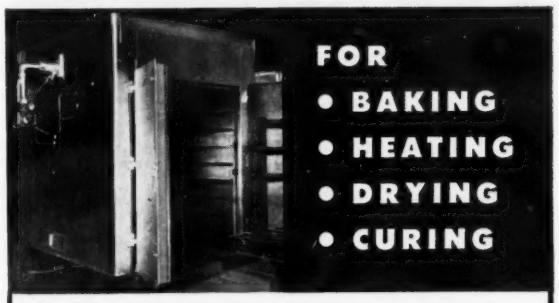


within a 30 x 20-in. area. Nonaccumulative accuracy is ±0.000250 in. on either axis, and position repeatability is within ±0.000050 in. The 8000-lb table can be used for positioning, drilling, reaming, boring, and similar operations.

It travels automatically from one position to the next, moving simultaneously and rapidly on both axes at the same speed with no overtravel. Hydraulic actuating cylinders in a balanced closed circuit hold the table rigidly in position when pistons are at rest. Operator's control panel is on a separate stand which can be moved. Standard 1-in. wide, eight-channel Mylar laminated paper tape is used. Made by **American Tool Works Co.**, Pearl Street, Cincinnati 2, Ohio.

For more details circle **NED-532 F9** on enclosed inquiry slip

NOW! A TRULY VERSATILE STANDARD KILN TYPE OVEN



MOCO has incorporated many custom, money-saving features into this standard oven — using gas fuels or electricity.

They offer *maximum temperature uniformity* and *complete safety equipment* at amazingly low initial cost. You can depend fully on a MOCO-engineered product!

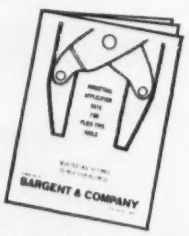
MORE INFORMATION?
If you are in the market for a standard oven, be sure and send for this informative brochure.

MOCO

MICHIGAN OVEN COMPANY
419 Brainard, Detroit 1, Mich.

For more details circle **NED-535 F9** on enclosed inquiry slip

FREE BOOKLET may solve your hand tool problem...



It's yours for the asking: Sargent's new booklet "Industrial Application Data for Plier-Type Tools." Contains detailed case histories on cutting, shaping, crimping, punching and holding problems solved with Sargent precision hand tools. Describes and illustrates Sargent's parallel action, compound hand pliers, punches and special purpose tools many of which are designed on a custom basis. Mail coupon now for your copy.

SARGENT & COMPANY, New Haven 9, Conn. Dept. 19-F

Gentlemen: Please send me your new booklet "Industrial Application Data for Plier-Type Tools."

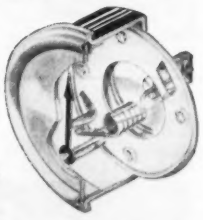
Name_____ Title_____
Company_____
Street_____
City_____ Zone____ State_____

Sargent & Company, New Haven 9, Conn. Dept. 19-F
Manufacturers of quality locks, hardware and tools since 1864.

For more details circle **NED-530 F9** on enclosed inquiry slip

NOW...
A HIGH PRESSURE GAUGE WITH THE GUTS FOR IT!

For your toughest high pressure jobs ... the NEW RMC High Pressure Gauge



The new Rochester High Pressure Gauge is a multi-wound helical Bourdon coil gauge, and **should not be confused** with the conventional "C" type Bourdon tube gauges.

Utilizing the resilient durability of the **complete** helical coil, the RMC gauge is unmatched for **extensive cycling** and continued accuracy under extreme conditions of overload pressures, high vibration, shock, and line pulsation.

Concentric models have no linkages, gears, or pivots—pointer is attached directly to the end of the helical coil.

When accuracy, safety, and long cycling life are worth more, specify Rochester High Pressure Gauges. Available in pressure ranges from 0-1000 to 0-10,000 p.s.i. Dial diameters: 1½", 2", 3", and 5".

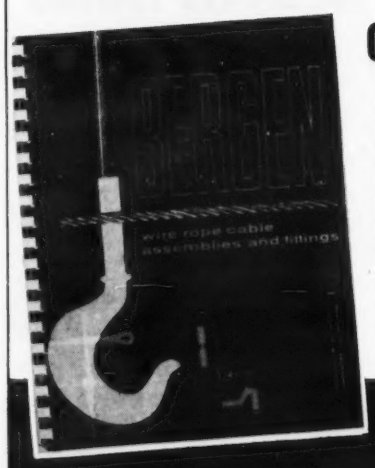
Write for complete information to:

RMC
ROCHESTER MFG. CO., INC.
114 Rockwood St., Rochester 10, N. Y.

INDUSTRIAL INSTRUMENTS

For more details circle **NED-533 F9** on enclosed inquiry slip

SEND FOR
cable assembly design catalog



Specifications, dimensions, strengths, materials for every wire rope or cable assembly application.

How to meet problems of standard or special fitting design as well as corrosion, abrasion, fatigue, high temperatures and other conditions.

Free design engineering service.

Send for Catalog CA-1.

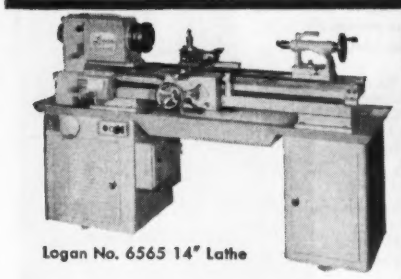
BERGEN FOR STRENGTH
BERGEN WIRE ROPE COMPANY
502 GREGG STREET, LODI, N. J.
SPECIALISTS IN THE UNUSUAL

For more details circle **NED-536 F9** on enclosed inquiry slip

its specifications add up to high production capacity

Logan 14" Lathe

- Spindle speeds to 2000 rpm.
- 1½" Levermatic collet chuck capacity
- 14⅝" swing over bed
- 9" swing over saddle cross slide
- 40" between centers



Logan No. 6565 14" Lathe

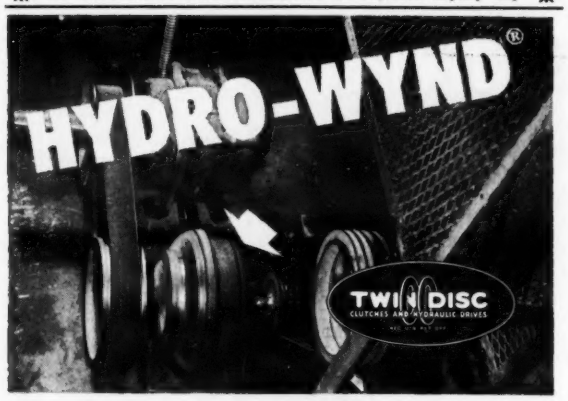
Logan's generous combination of high-quality features means greater reliability, accuracy, and longer life.

- **Oversize spindle—1⅝" bore—four super-precision ball bearings—built-in preload**
- **Variable-speed drive—change speed with work turning—without shifting belts**
- **Warp-free lathe bed—high, strong walls braced by oversize ribs withstand heaviest stresses; two V-ways, two flat ways flame-hardened, precision-ground**

These and many more reasons prove Logan's greater working capacity. The specifications tell the story. Write for complete information.

LOGAN ENGINEERING CO.
Dept. Q-659, 4901 Lawrence Ave., Chicago 30, Ill.

For more details circle NED-537 F9 on enclosed inquiry slip



Masterminds winding operations with FLUID DRIVE

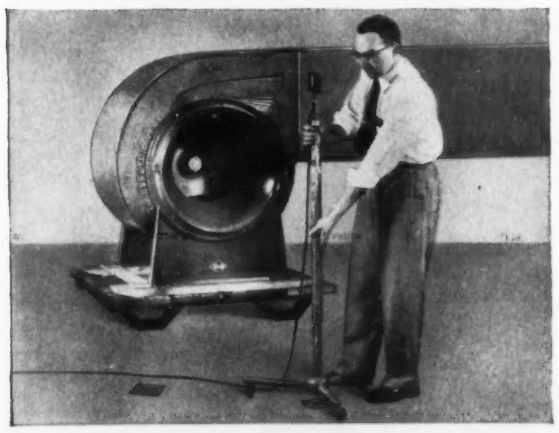
Here is the most *economical*, most *dependable* solution to automatic control of your winding operations on textiles, paper, steel, plastic, rubber, wire, foil, etc. By incorporating a fluid coupling with a planetary gear set, the Twin Disc HYDRO-WYND *automatically maintains predetermined tensions* while the roll rpm *decreases* and roll diameter *increases*. Now available in new Model 12.2, as well as 8.4. Write Dept. DS for *Bulletin 163-A*.

TWIN DISC

TWIN DISC CLUTCH COMPANY, Racine, Wisconsin • HYDRAULIC DIVISION, Rockford, Illinois

For more details circle NED-538 F9 on enclosed inquiry slip

"X" Marks the Spot



ILG CENTRIFUGAL FANS

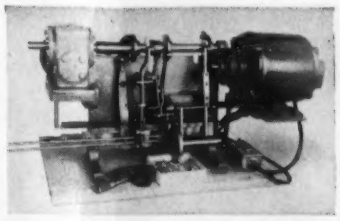
Ilg *airfoil* centrifugal fans with backward curved (BC) blades are silent operators. Sound tests by traveling mike, as shown, prove these direct-connected fans can provide larger air capacity than older types—*with no increase in sound level, with less drag and shock loss.* For operations to 9" static pressure. Send for Bulletin No. 257.

ILG ELECTRIC VENTILATING COMPANY
2806 N. Pulaski Road, Chicago 41, Ill.
Offices in 57 Principal Cities

Member of Air Moving and Conditioning Association Inc. (AMCA)

For more details circle NED-539 F9 on enclosed inquiry slip

TUBE CUT-OFF MACHINE cuts up to 12,000 pieces per hour



Tubing of aluminum, copper, brass, or other copper alloys up to 7/16 in. in diameter can be cut within ±0.005 in. of any desired length up to 2 in. by this automatic machine. It can also cut certain plastic materials. Dual feed cuts from 6000 to 12,000 pieces per hour, the rate varying with tubing diameter and wall thickness. One operator can service several machines. Made by **H & H Machine Co.**, Noble & Jackson Streets, Norristown, Pa.

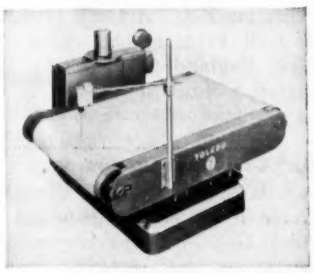
For more details circle NED-540 F9 on enclosed inquiry slip

DUMP TRAILER LOCK clamps secure body to frame

Wear that occurs on the body, chassis, and packing glands of the hydraulic lift of dump trailers is eliminated by the Lock-O-Matic locking device, suited for all makes and models. Heavy spring - loaded clamps rigidly secure the body to the frame during transit. Unit is automatic, self-contained, and jam-free. When the hydraulic system is engaged to start the lift operation, an interim valve retracts the clamps. Made by **Trailco Mfg. & Sales Co.**, Hummels Wharf, Pa.

For more details circle NED-541 F9 on enclosed inquiry slip

AUTOMATIC CHECK WEIGHER for up to 40 packages in 1 min



Weights of packages from 50 to 200 lb are checked at speeds up to 40 items per minute by the Model 9460 automatic checkweigher. Accuracy is about 1 part in 3000. Device has a motorized belt conveyor on the weigh section. Bags, cartons, boxes, packages, blocks, cans, or tubes are continuously checkweighed with equal speed and accuracy. Quick adjustment changes it from one package weight to another. Key reset type magnetic counters provide numerical data useful in controlling packing or processing machine operation. Device will also operate reject mechanisms, audible signals, and trend indicators. Made by **Toledo Scale Corp.**, Toledo Scale Div., 1213 Telegraph Rd., Toledo 12, Ohio.

For more details circle NED-542 F9 on enclosed inquiry slip

FREE TRIAL OFFER

A NEW WAY
to clean working hands

There has never been such a combination of plus features to keep workers' hands healthy — and therefore on the job day after day!

It's a brand new scientific formulation — non-depleting Lan-O-Kleen PLUS.®

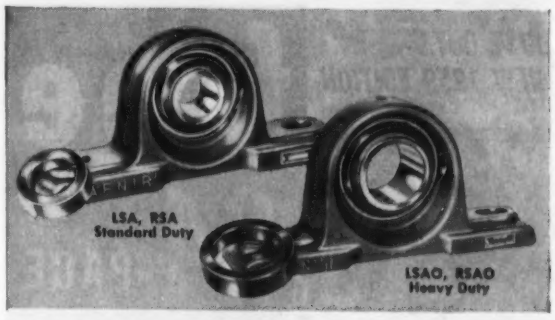
It's WEST'S famous Lan-O-Kleen handcleaner . . . plus a softer scrubbing action . . . plus a gentler sudsing action . . . plus a soothing lanolin action!

All of which combine to combat the depletion of natural skin oils while hands are being washed clean.

Highly important is the exclusive process that keeps the rich lanolin content of Lan-O-Kleen PLUS "free" to soothe and soften. Lanolin is impregnated into a corn meal base instead of being "held" in the soap by conventional methods. In this way, it is instantly released for more positive, beneficial action.

FREE TRIAL OFFER. We'd be glad to send five pounds of Lan-O-Kleen PLUS and loan a dispenser for free trial. Or we'll send a smaller sample for evaluation. Just use the reader service of this magazine. Or write West Chemical Products Inc., 42-16 West Street, Long Island City 1, N. Y.

For more details circle NED-543 F9 on enclosed inquiry slip



Fafnir brings you modern design in sealed ball bearing pillow blocks

In appearance and performance, these new Fafnir ball bearing pillow blocks are engineered for modern machines. Rugged-looking, streamlined cast iron housings with machined bearing seats and bases incorporate integral seal ball bearings. Fafnir-originated eccentric cam design self-locking collars permit easy, positive bearing installation. (No shaft shoulders or mounting accessories needed.) Made to the same bolt-hole spacings and base-to-center heights as Fafnir SA and SAO pillow blocks, the new units have provision for relubrication where service requires. Write for new bulletin. The Fafnir Bearing Company, New Britain, Connecticut.

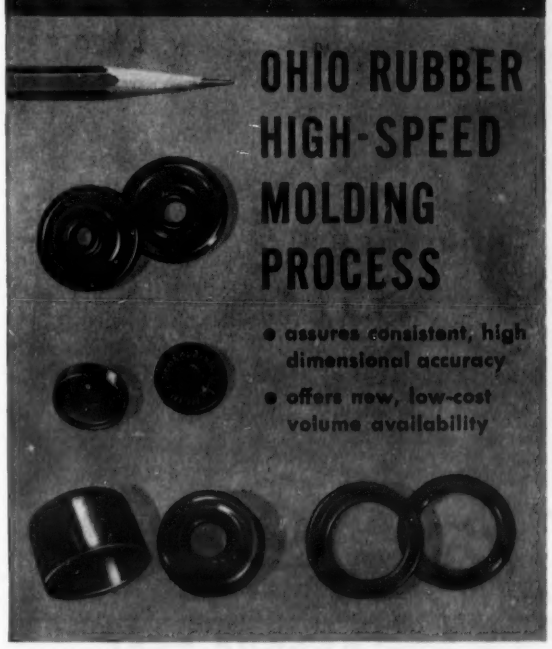
Contact-type Plya-Seals (RR Series) for slow-to-moderate speeds, dirty service.

Slinger-type Mechani-Seals (LL Series) for friction-free sealing at higher speeds

FAFNIR BALL BEARINGS

For more details circle NED-544 F9 on enclosed inquiry slip

New way to cut costs of rubber component parts!



High-precision is key—Precise tolerances within ±0.003" are now possible on custom-molded rubber parts produced at rates up to 200,000 pieces per day—thanks to Ohio Rubber's new high-speed, continuous molding process.

Large volume cost saving is now available on typical precision parts such as shock absorber seals, engine valve stem deflectors, electric condenser caps, aerosol container valves, and many others, all formerly produced on a costly small-volume basis because of the high degree of dimensional accuracy and compound control involved.

Uniformity insured—The New ORCO continuous process insures uniform material thickness, properties and quality consistent with the most rigid specifications. Functional parts up to 1½" in diameter and 1" in thickness can be molded. For most economical use of the process a minimum annual requirement of 500,000 parts is recommended.

91N1

SEND FOR ILLUSTRATED BULLETIN!

All the facts on Ohio Rubber's new high-speed, continuous molding process are available in bulletin form. Send for your free copy today! Better yet, send complete details of your precision rubber part specifications and requirements and get the complete cost-saving story.

ORCO THE OHIO RUBBER COMPANY
WILLOUGHBY, OHIO
A DIVISION OF THE EAGLE PICHER COMPANY

For more details circle NED-545 F9 on enclosed inquiry slip

JUST OUT! NEW 1959 EDITION

free 84-PAGE CATALOG

One Complete Source of Detailed Specifications for Designers, Production Managers, Toolroom Foremen

Hundreds of NEW ITEMS

ALL NEW — Complete specifications and cost saving data on over 2000 "Standards", including world's largest line of work-holding equipment, chuck jaw blanks, handles, knobs, wheels, strap clamp assemblies, forged items, plus hundreds of other jig and fixture components. Detailed specifications, engineering drawings. The one complete source for data on all the "standards" for tool, die, jig, and fixture design and application. Write for your FREE copy today.

JERGENS TOOL SPECIALTY CO.
Dept. NE-6, 712 E. 163rd St., Cleveland 10, Ohio

For more details circle NED-547 F9 on enclosed inquiry slip

whatever the job...

PERMACEL
INDUSTRIAL ADHESIVES

PERMACEL New Brunswick, N.J.
TAPES • ELECTRICAL INSULATING MATERIALS • ADHESIVES

For more details circle NED-548 F9 on enclosed inquiry slip

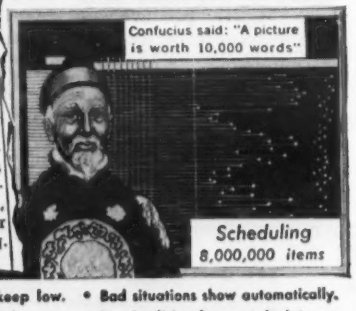
NAMES IN THE NEWS!

Jupiter! Redstone!

Missile Development Centers are among the largest Government Defense users of Produc-Trol for research, production, manpower and other types of scheduling.

PRODUC-TROL Visual Control

not only schedules, But automatically checks with TIME, LINE and COLOR control



- Original cost and upkeep low.
- Schedules and time checks operations.
- Historical record to back it up.
- Bad situations show automatically.
- Its simplicity has put it into world-wide use.
- Analyze 100 items in 10 seconds.

Creator of Effective Tools for Effective Management

Phone Westport, Conn. CA 7-4111 or write
WASSELL ORGANIZATION, INC.
Westport, Conn.

Please send Free Booklet on Produc-Trol. NED
NAME ..... COMPANY .....
ADDRESS .....
CITY ..... STATE .....

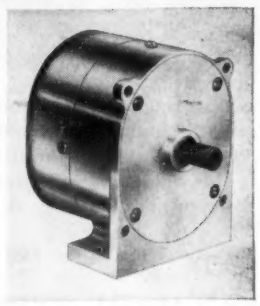
For more details circle NED-549 F9 on enclosed inquiry slip

MAGNETIC INSPECTION SYSTEM detects surface, subsurface defects

Invisible defects such as subsurface cracks, laps, and voids are detected by the Detectascope. The portable magnetic system can be used safely through painted or plated surfaces of ferrous metal parts and assemblies. Unit also demagnetizes the part after inspection. Extension cord and foot switch, black light hood assembly, transformer, 5-gal tank, agitating pump, and voltage regulator in a mobile cabinet are included. Operation is on 110 v. Magnetizing the part causes iron particles in an oxide solution to concentrate at the point of defect. Size is 18½ x 36 x 52¾ in., weight is 150 lb, and price is $795. Made by **Ferro Machine & Tool Corp.**, 5514 W. Washington St., Indianapolis 41, Ind.

For more details circle NED-550 F9 on enclosed inquiry slip

GEAR MOTOR rated 175 lb-in. at 10 rpm



Smooth-running, quiet Model HD gear motor, offered in any single speed from ½ to 1000 rpm, is built for continuous duty in vending and business machines, pumps, conveyors, and machine tools. Torques range up to 175 lb-in. at 10 rpm. Totally enclosed and air cooled, the two-pole, shaded - pole unit will not create radio and television interference. Features include hardened steel gears and pinions and large felt reservoir touching every journal. Motor is offered for 115-v ac operation, as well as in special cycles and currents. Made by **New England Gear Works**, 557 S. End Rd., Southington, Conn.

For more details circle NED-551 F9 on enclosed inquiry slip

Air Conditioning Guide

Enlarged "Heating, Ventilating, Air Conditioning Guide 1959" is a cloth-bound 37th edition which provides large illustrations, working charts, and tables relative to heating, refrigerating, and air conditioning systems. The 768-page technical data section follows previous formats and is divided into 12 general sections. Five new chapters cover high temperature water systems, the heat pump, evaporative air cooling and humidification, and snow melting. A catalog data section of 461 pages shows products of 309 manufacturers. Guide is available for $12 from the American Society of Heating, Refrigerating and Air-Conditioning Engineers, 62 Worth St., New York 13, N. Y.

For more details circle NED-552 F9 on enclosed inquiry slip

SPECIFY

RUGER CRANES

FOR LIFTING POWER WHERE AND WHEN YOU NEED IT!

Ruger Hydraulic Cranes reach in-under-over . . . unload trucks . . . lift motors, machinery and crates . . . lay pipe . . . tilt drums . . . mate dies . . . combine all your lifting and transporting problems into one operation. Manual and electric models available are floor . . . truck . . . convertible floor and truck . . . short mast . . . high mast . . . wide base . . . adjustable legs and retractable outrigger for side lifting. Send today for descriptive literature.

THE CRANE WITH 1000 USES

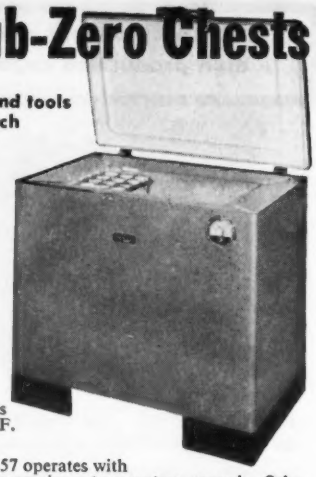
RUGER

RUGER EQUIPMENT, INC.
619 West Fourth Street, Uhrichsville, Ohio

For more details circle NED-553 F9 on enclosed inquiry slip

REVCO Sub-Zero Chests

- for shrink fits
- for seasoning gauges and tools
- for testing • for research
- for processing to –140°



Model RSZ503 Rivet Cooler (shown) equipped with 90 rivet canisters, temperatures to –30° F. 110V, 60 cycle, single phase.

Model SZH153 with temperatures to –95° F. 110V; 60 cycle, single phase.

Model SZH653, larger capacity, temperatures to –85° F. 110V, 60 cycle, single phase.

Model SZHC657. Same capacity as SZH653 but attains temperature as low as –140° F. 220V, 60 cycle, single phase.

Refrigeration: Model SZHC657 operates with 3 Tecumseh hermetic compressors in a two system cascade. Other Sub-Zeros use 2 hermetics in a two stage system. Rivet Cooler operates with single hermetic unit. All models equipped with efficient fan-cooled condensers — no liquid coolant required. *Write Today for Full Specifications and Prices.*

Description	Model	Cu.Ft.	Temp. Range		Outside Dim.			Inside Dim.		
			Rm. 70°	Rm. 110°	L	W	H	L	W	H
Sub-Zero	SZH153	1.5	–95° F.	–85° F.	42"	28"	42¾"	23"	9"	12½"
Sub-Zero	SZH653	6.5	–85° F.	–75° F.	60"	28"	42¾"	47"	15"	16"
Sub-Zero	SZHC657	6.5	–140° F.	–125° F.	60"	28"	42¾"	47"	15"	16"
Rivet Cooler	RSZ503	5.0	–30° F.	–20° F.	42"	28"	41"	30"	16"	18"

REVCO, Inc.
Setting Trends in Refrigeration since 1938 Deerfield, Michigan

For more details circle NED-554 F9 on enclosed inquiry slip

CUT WIRE FORMS COSTS with Robertson

WIRE FORMS • STRIP FORMS
THREADING & COLD HEADING

We specialize in larger wire products from 2" long to some that require 12 to 14 ft. and up, to ¾" diameter wire, using any stock to suit the job requirement — carbon steel, stainless steel, brass, bronze or aluminum . . . also special alloys.

- We form, notch, broach, or flatten on the same high speed wire and strip form equipment. This reduces cost.
- We draw much of our own wire and stock large quantities of other types and sizes . . . for better delivery to our customers.

Our sixty years of experience in wire and strip products has helped hundreds of customers realize big savings in time and production costs — big gains in precision and uniformity on various sized components.

Send us a sketch, blue print or sample for a quote. You'll see what we mean.

Send today for Robertson's Free manual on how to specify and order Wire and Strip Forms - Cold Heading and Threading.

ROBERTSON STEEL & IRON CO.
201 Commerce St., Cincinnati 2, Ohio Phone: PA 1-5130

For more details circle NED-555 F9 on enclosed inquiry slip

PRINT-TO-PRODUCT SERVICE

FORGINGS BY *Cleveland*

How many of these steps does your product need?

If you can use skills and close tolerances like these, write for information to *Forge & Fittings Division, H. K. Porter Company, Inc., Cleveland 4, Ohio.*

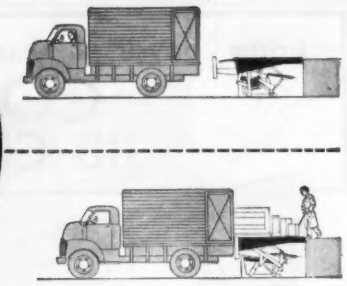
FROM A SINGLE SOURCE:
FORGINGS . . . Hammer, Press, Upset
MACHINING . . . Broaching, Milling, Turning, Drilling, Grinding
FINISHING . . . Heat Treating, Assembling, Painting, Plating

FORGE & FITTINGS DIVISION PORTER H.K. PORTER COMPANY, INC.

PORTER SERVES INDUSTRY with 12 DIVISIONS including: Thermoid, Delta-Star Electric, National Electric, Riverside-Alloy Metal, Refractories, Connors Steel, Vulcan-Kidd Steel, Forge and Fittings, Disston, Leschen Wire Rope, Mouldings and H. K. Porter Company (Canada) Ltd.

For more details circle NED-556 F9 on enclosed inquiry slip

NEW Automatic DOCK RAMP



Truck actuated . . . needs no counterweight

- Completely mechanical operation, powered by truck backing against ramp bumpers.
- Controlled tension spring assembly provides smooth operation and eliminates need for expensive counterweight.
- Positions automatically . . . has five other completely automatic features including cross traffic safety lock and self-aligning bumper.
- Low in cost and easily installed . . . recessed and front-of-dock models.

Rotary® AUTOMATIC DOCK RAMP

GET FACTS TODAY

***TEAR OUT** this page, clip to letterhead and mail to*

ROTARY LIFT CO.
Division of Dover Corporation
1062 Kentucky, Memphis 2, Tenn.

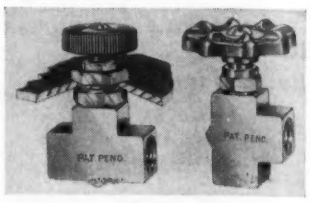
▲ For more details circle **NED-557 F9** on enclosed inquiry slip ▲

CASTER BRAKE MECHANISM actuated by foot lever

Caster mounted equipment of various types can be equipped with an adjustable brake which uses a formed brake shoe to contact the tire tread of the caster. Brake shoe is controlled with a foot lever by a cam action for secure locking or complete release. Compensation for tire wear is provided. Brake can be used with standard 4 x 4-in. top plate casters; steel disc casters with 4, 5, and 6-in. diameter replaceable tired wheels; and 4 to 6-in. diameter all-rubber wheels with hard or soft tread. Made by **Jarvis & Jarvis, Inc.**, Scudder Avenue, Palmer, Mass.

▲ For more details circle **NED-560 F9** on enclosed inquiry slip ▲

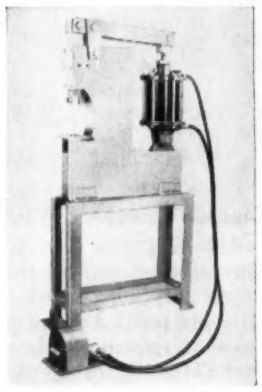
SHUT-OFF VALVES for up to 500-psi fluid service



Both leakage to atmosphere and clogging of activating threads by viscous fluids is prevented in 30V - 50V Series screw stem shut-off valves. Single Buna N O-ring seal eliminates leakage problems. Standard models are offered for use with fuel oil, gasoline, kerosine, air, water, mild alkalies, acids, alcohols, and coolants up to 500 psi at −40 to 250° F. They are made in 1/8 and 1/4-in. IPT sizes and have large wheel or knurled handles. Special units for pressures up to 3000 psi are also available. Made by **Anderson Brass Co.**, 102 S. Campbell Ave., Detroit, Mich.

▲ For more details circle **NED-561 F9** on enclosed inquiry slip ▲

NOTCHER-SHEAR is rated 6½ tons

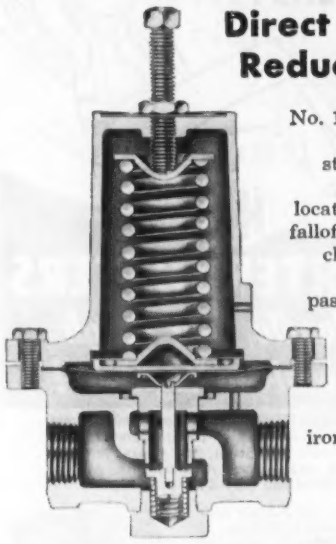


Operating on 100 psi line pressure, the 6½-ton capacity Little Blacksmith No. 56 will cut a 90-degree 2½ x 2½-in. notch in 3/16-in. mild steel. It will notch or cut off 2 x 2 x 3/16 in. angle, shear 3 x 3/16 in. bars, and punch a 5/16 in. hole through 1/4 in. plate, or a 2-in. hole through 16-gage sheet. Unit weighs 225 lb and has a 2½-in. throat depth. Price is $396. Made by **J. F. Kidder Mfg. Co.**, 426 Colchester Ave., Burlington, Vt.

▲ For more details circle **NED-562 F9** on enclosed inquiry slip ▲

NEW!

Direct Operated Reducing Valve

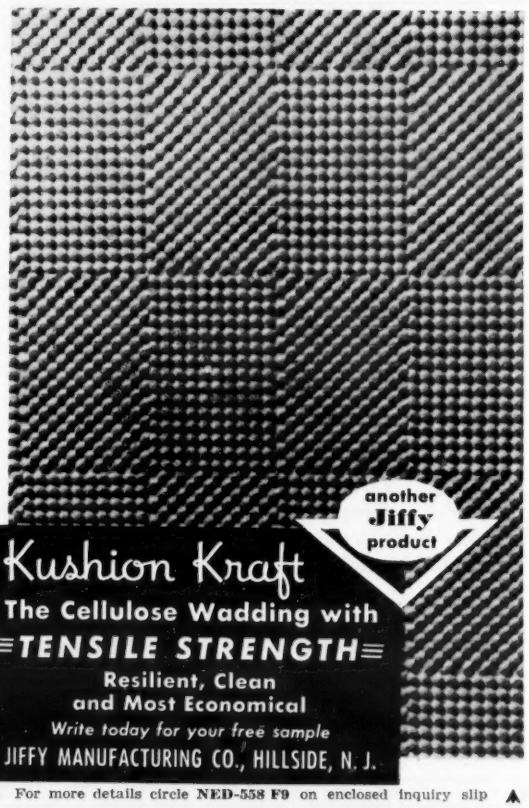


No. 17-1 Direct Operated Reducing Valve, for steam service, features accurately sized and located ports to minimize falloff; isolated diaphragm chamber for maximum stability; large body passages; lapped seating surfaces for tight shutoff. (No. 17-22 with soft seats for air service, also available.) Made of iron in sizes ½", ¾", 1". Reduced pressure ranges 2-12; 8-50; 25-150 psi.

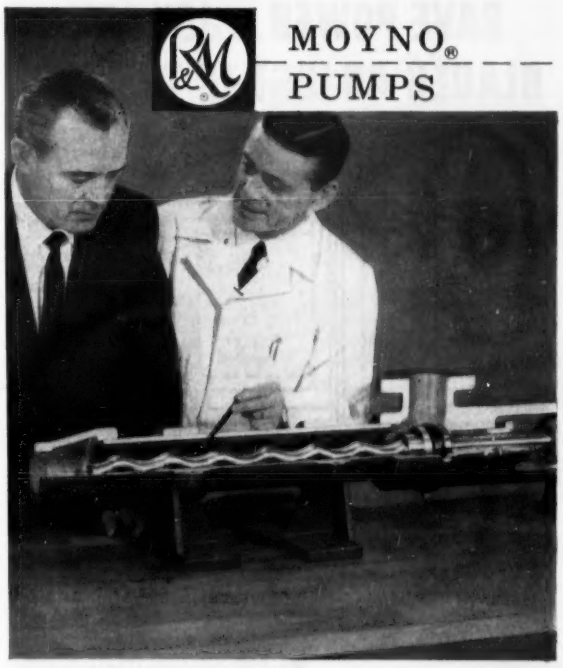
Ask Your Mason-Neilan Industrial Distributor.
He is ready to serve you and to ship promptly from stock. Ask for catalog or write direct.

MASON-NEILAN
Division of Worthington Corporation
69 NAHATAN ST., NORWOOD, MASS.

▲ For more details circle **NED-563 F9** on enclosed inquiry slip ▲



▲ For more details circle **NED-558 F9** on enclosed inquiry slip ▲



Let MOYNO'S® *"Progressing Cavities"* Cut Pump Maintenance Costs!

MOYNO's unique *"progressing cavity"* principle cuts pump maintenance costs because material being moved contacts only one moving element. MOYNOS are constructed to stoutly resist corrosion and abrasion. As shown in the cutaway model above, MOYNO's screw-like rotor revolves in a double-threaded stator forming *"progressing cavities"* that move material smoothly along, without foaming, aerating or crushing.

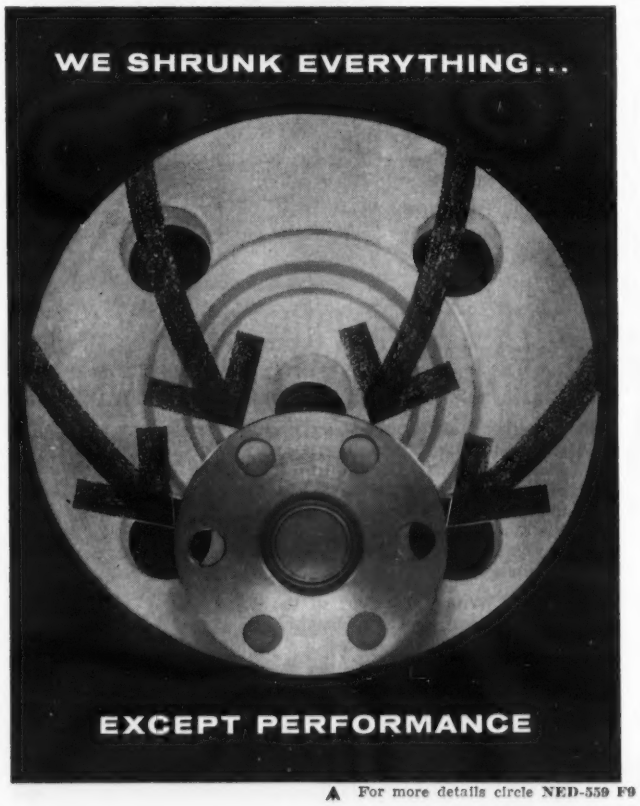
Typical materials pumped include non-pourable pastes, abrasive slurries, chemicals, foods, acids, even suspended solids up to one inch in size. Many materials now successfully pumped by MOYNO were once considered "unpumpable."

Capacities are available up to 500 gpm and pressures up to 1000 psi. Off-the-shelf replacement parts are always immediately available. Write today for Bulletin 30—NE

ROBBINS & MYERS, INC.
motors, household fans, Propellair industrial fans, hoists, Moyno industrial pumps
SPRINGFIELD, OHIO · BRANTFORD, ONTARIO

Capacities to 500 gpm; pressures to 1000 psi

▲ For more details circle **NED-564 F9** on enclosed inquiry slip ▲



Now you can save up to 50% in piping costs in high-pressure applications—with this new smaller and lighter flange

Now, for the first time, the long-standing problem of how to fit heavy and bulky flanges into the complex configurations of today's high-pressure piping systems has been solved. Equally important, this new stainless steel flange by Accessory Products actually handles pressures *equivalent* to those being handled by standard ASA flanges...*at a tremendous saving in cost!*

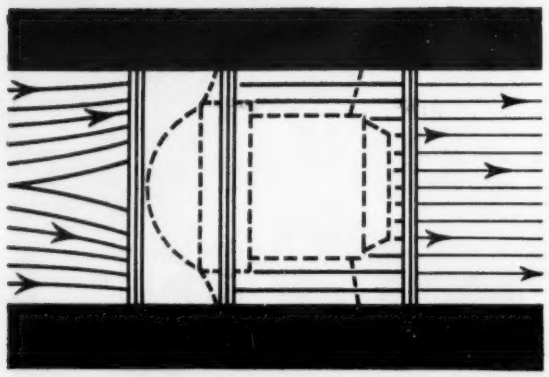
Available in line sizes from 1/4 inch through 2 inches, priced from $30 to $65—your choice of weld-neck, male pipe thread special high-pressure male adapters, and blind flanges. These flanges provide the ultimate in low-cost, compact, and reliable connectors for all high-pressure piping applications. For the complete story and specifications to meet your piping needs, write for Design Bulletin DB-159. Our engineers will be happy to discuss your specific applications.

***APCO* ACCESSORY PRODUCTS CORPORATION**
a division of textron corporation
616 W. Whittier, Blvd., Whittier, Calif. Phone OXford 3-3747

▲ For more details circle **NED-559 F9** on enclosed inquiry slip ▲

▲ For more details circle NED-565 F9 on enclosed inquiry slip ▲

SAVE POWER... JOY FAN BLADES ADJUST TO THE JOB



You get more power per pound with in-line design and the aerodynamically balanced blades of Joy Axivane® Fans. Adjustable blades correct for poor duct work and unpredictable system resistance.

WSW 1 6937-212

Find Out More about Joy High-Performance Fans... Get FREE BULLETIN 212-54

JOY MANUFACTURING COMPANY
Oliver Building, Pittsburgh 22, Pa.
In Canada: Joy Manufacturing Company (Canada) Limited, Galt, Ontario

▲ For more details circle NED-566 F9 on enclosed inquiry slip ▲

send for this FREE EICO Electronics Catalog

you save 50% on Top-Quality Test Instruments Hi-Fi • Ham Gear

KITS AND ASSEMBLED

Ready-to-use for professional and home use

TEST INSTRUMENTS
battery eliminators
battery testers
bridges
decade boxes
electronic switch
flyback tester
oscilloscopes
probes
signal and sweep generators
tube testers
transistor tester
vacuum tube voltmeters
volt-ohm-milliammeters

HI-FI
stereo and monaural
tuners
preamplifiers
power amplifiers
integrated amplifiers
speaker systems

HAM GEAR
cw transmitter
modulator-driver
grid dip meter

OVER 1 MILLION EICO instruments in use throughout the world.

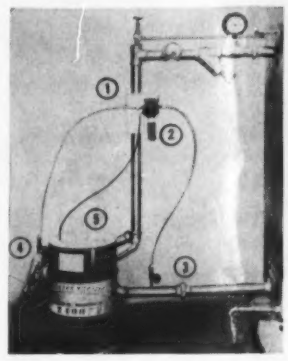
LIFETIME service and calabration guarantee. IN STOCK at your neighborhood EICO dealer. Send now for FREE catalog NED-6

EICO ® 33-00 N. Blvd., L. I. C. 1, N. Y. ... praised by the experts as BEST BUYS IN ELECTRONICS

©1959 ELECTRONIC INSTR. CO., INC.

▲ For more details circle NED-567 F9 on enclosed inquiry slip ▲

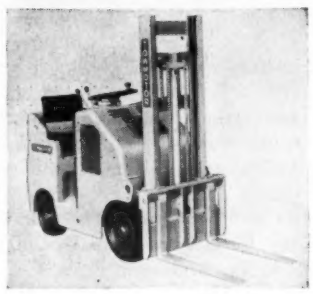
LIQUID CHEMICAL FEEDER for treating cooling tower water



As little as 0.1 gallon of filtered liquid chemical can be metered into cooling tower water by the automatic Micro Feeder system to prevent corrosion and scale formation. Aspirator type feeder (1) with differential pressure regulator maintains a constant pressure drop across a porous stone (2) that acts as a rate valve. Plastic tubing connects the feeder to the suction (3) and discharge (4) lines of the tower's circulating pump. Vacuum created by differential pressures induces the reagent to flow from the supply drum (5) through the porous stone rate valve. Unit is suited for 10 to 40-ton cooling towers. Made by **Bird-Archer Co.**, 4337 N. American St., Philadelphia 40, Pa.

▲ For more details circle NED-568 F9 on enclosed inquiry slip ▲

LOW PROFILE TRUCKS for use in low headroom areas



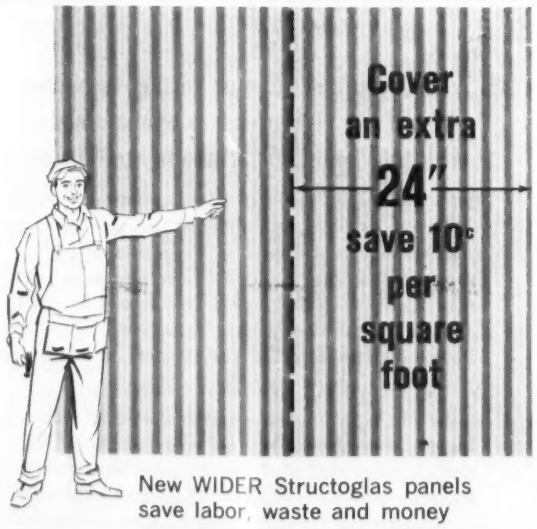
High warehouse stacking and easy access to trucks, boxcars, and other low headroom areas are possible with the low profile Van-Stack series of fork lift trucks. Two gasoline or LP-gas powered models, the Model 410 with 2000-lb capacity and Model 440 with 3000-lb capacity, are offered. Respective lengths, without forks, are 5 ft 10 in. and 6 ft 2 in. Minimum over-all height with mast lowered is 65 in., and over-all width is 2 ft 8 in. for both models. Maximum lifts range from 120 to 144 in. Model 410 has a 90 fpm lifting speed and 30 in. forks, while Model 440 has a 60 fpm lift speed and 36-in. forks. Fuel tanks are enclosed by the rear counterweight for protection. The front seat may be entered from either side. Made by **Towmotor Corp.**, 1226 E. 152nd St., Cleveland 10, Ohio.

▲ For more details circle NED-569 F9 on enclosed inquiry slip ▲

Diesel Engines

Allis-Chalmers Mfg. Co., Engine-Material Handling Div.—Design, construction, and mechanical advantages of recently introduced 21000 and 16000 diesel engines are pointed up in 16-page Catalog BU-540. These engines are respectively rated 340 and 230 hp at 2000 rpm. Highlighted is the new controlled turbulence combustion system.

▲ For more details circle NED-570 F9 on enclosed inquiry slip ▲



New WIDER Structoglas panels save labor, waste and money

Two new widths of Structoglas reinforced fiber glass panels give you more installed coverage area per dollar than any other panel (51½" for skylights, 50" for glazing, both covering 48"). Wider Structoglas has fewer overlaps, needs less fasteners, takes less time to install. You actually save 10c per square foot when you install 51½" Structoglas instead of ordinary 27½" panels.

Write for specs and prices today! Structoglas Division of International Molded Plastics, Inc. Dept. NE6, Cleveland 9, Ohio

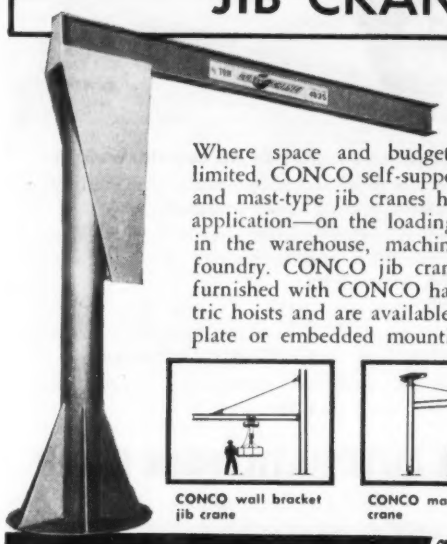
structoglas®

5810

▲ For more details circle NED-571 F9 on enclosed inquiry slip ▲

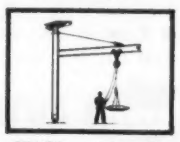
MOTOR DRIVEN or HAND OPERATED

CONCO JIB CRANES



Where space and budget are both limited, CONCO self-supporting, wall and mast-type jib cranes have a wide application—on the loading platform, in the warehouse, machine shop or foundry. CONCO jib cranes may be furnished with CONCO hand or electric hoists and are available with floor plate or embedded mounting.

CONCO wall bracket jib crane



CONCO mast-type jib crane

CONCO ENGINEERING WORKS
Division of H. D. CONKEY & COMPANY
57 Grove Street • Mendota, Illinois
AFFILIATES Conco Engineering Works-Domestic Heating Equipment
Conco Building Products, Inc., Brick, Tile, Stone

▲ For more details circle NED-572 F9 on enclosed inquiry slip ▲

DIXON HOSE FITTINGS for Every Industrial Hose Service IN SPECIAL METALS

In case you did not know it, nearly all products in the DIXON QUALITY LINE are readily available in Special Metals to meet the widest variety of anti-corrosion, anti-abrasion requirements—

STAINLESS STEEL • ALUMINUM
MONEL METAL • SPECIAL ALLOYS

If you need Couplings, Nipples, Menders, Clamps, Valves and other fittings for hose handling chemicals, oils, gases, sand, grout or other corrosive or abrasive materials, specify Dixon—for dependability.

From Your Hose Supplier or Industrial Distributor

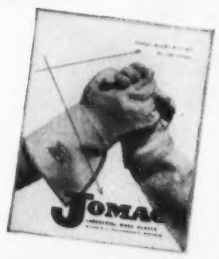
DIXON Valve & Coupling Co.
GENERAL OFFICES & FACTORY—PHILADELPHIA 22, PA. BRANCHES—CHICAGO BIRMINGHAM • LOS ANGELES • HOUSTON • DIXON VALVE & COUPLING CO., LTD., TORONTO

▲ For more details circle NED-573 F9 on enclosed inquiry slip ▲

SLASH GLOVE COSTS

GIVE EXTRA PROTECTION with the JOMAC COST-REDUCTION PLAN

Customer: major metalworking plant. Operation: fabricating large sheet metal parts. This is just one of scores of case histories on how the Jomac Cost-Reduction Plan has made big savings. Proof that this plan can work for you is yours for the asking.



FREE! Write for a copy of the Jomac Glove Catalog. Dept. G, Philadelphia 38, Pa.

JOMAC INDUSTRIAL GLOVES

Plants in Philadelphia, Pa., and Warsaw, Ind.
In Canada: Safety Supply Company, Toronto
In Europe: North-Jomac Ltd., London, W1

▲ For more details circle NED-574 F9 on enclosed inquiry slip ▲

MORE REACH *for the* Tapping Head

You can machine tap in deep holes and awkward locations with ordinary, standard taps *plus Walton's NEW "Style B" Extensions.* Single units fit together to make a rigid, closely aligned assembly, for either machine or hand tapping operations.

Adaptable to all standard taps from #0 to ½". A complete, boxed set of 9 tools lengthens taps from 8" to 28¼". Eliminates the need and cost of expensive, "long" taps.

Write for Specifications and Data Sheet #26. These new extensions will be sent for 30 days Free Trial, if requested.

SINCE WALTON TOOLS 1908 HARTFORD, CONN.

THE WALTON CO. HARTFORD 10, CONN.

▲ For more details circle NED-575 F9 on enclosed inquiry slip ▲

—REPLACED A PUMP THAT LASTED 2 MONTHS

A leading manufacturer of household appliances* installed this Nagle 1" type H-A-W horizontal shaft pump over 2 years ago and it's still going strong. It is in the Bonderizing Dept., shown, handling phosphate slurry at the rate of 10 GPM, against a 25' head. Pump is self-priming. Simple slippage seal adjustment. Readily accessible stuffing box. Pump it replaced lasted less than two months. If you have an abusive pumping problem Nagle Pumps can cut your costs too! Send for "Pump Selector".

*Details on request.

NAGLE PUMPS

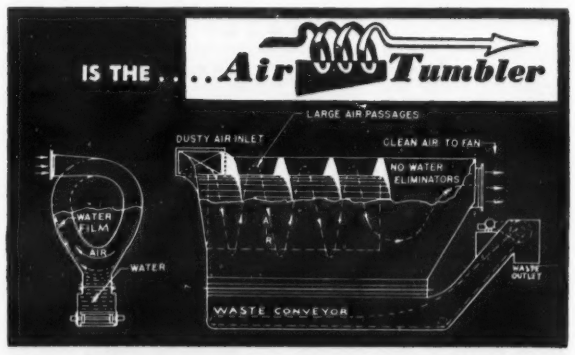
NAGLE PUMPS, INC.
1265 CENTER AVE., CHICAGO HEIGHTS, ILL.

PUMPS FOR ABRASIVE AND CORROSIVE APPLICATIONS

▲ For more details circle NED-576 F9 on enclosed inquiry slip ▲

The MASTER of DUST in INDUSTRY

IS THE . . . . Air Tumbler



SIMPLE—DEPENDABLE—NO FIRE HAZARD
HIGH EFFICIENCY—CONSTANT CAPACITY
LOW HUMIDIFICATION—LOW OPERATING COST

More than one million CFM in ONE plant

Write for Bulletin No. 581. Address:

DUST SUPPRESSION & ENGINEERING CO.
P. O. BOX 67 • LAKE ORION, MICHIGAN

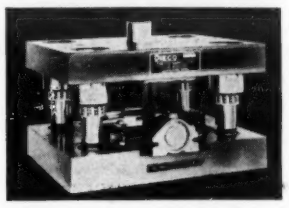
▲ For more details circle NED-577 F9 on enclosed inquiry slip ▲

PARTS CLEANER
cleanses by hose, soak, and air gun

Cleanmaster Model 50 parts cleaner uses Hi T Degreasol fast drying, film-free compound for cleaning of air and oil filters, generators, automatic transmissions, and other parts. It minimizes the time required to remove dirt and grime from parts of various sizes. Cleaning is performed through a continuous flow hose, air-agitated soaking tank, or by jet air gun. Made by **Practical Mfg. Co.**, 2840 Fourth Ave. S., Minneapolis, Minn.

▲ For more details circle NED-578 F9 on enclosed inquiry slip ▲

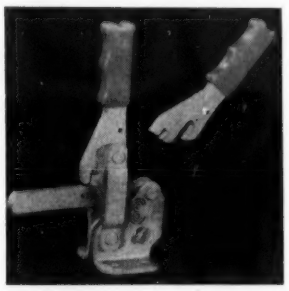
BALL BEARING DIE SET
assures punch and die alignment



Easily assembled and disassembled ball bearing die set assures positive alignment of punches and dies to eliminate burred parts and reduce rejects. Die set can be "stripped" from guide posts. Preloaded ball bearings in the punch holder provide negative clearance to maintain alignment even after millions of strokes. Angled slots in bearing retainer offset each ball by 4 degrees, preventing them from tracking into the bushing. Made by **E. W. Bliss Co.**, Die Supply Div., 1400 Brookpark Rd., Cleveland 9, Ohio.

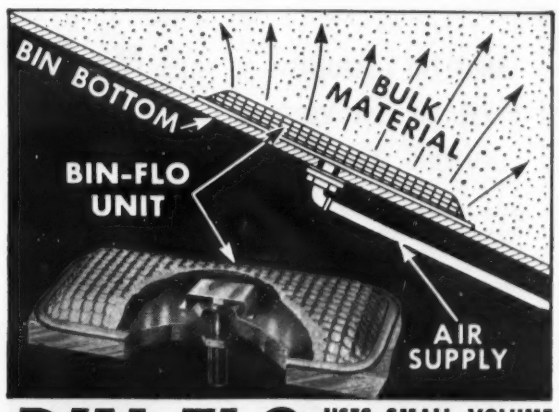
▲ For more details circle NED-579 F9 on enclosed inquiry slip ▲

TOGGLE CLAMPS
handles are removed or laid back



Lay-Bak and Take-Off handles available on 400 Series of Ceco toggle clamps provides them with a low profile for maximum clearance when machining stock or parts on drill presses, routers, or mills. The Lay-Bak models have a profile of 3½ in., and models with Take-Off handles have a profile of 3 in. The removable polyethylene-grip handle can be used to operate a number of clamps. Clamps are offered with straight and right angle bases, holding bars of various lengths and types, and recommended holding pressures from 325 to 500 lb. Made by **Consolidated Equipment Co.**, Box 2216, Wichita 1, Kans.

▲ For more details circle NED-580 F9 on enclosed inquiry slip ▲



BIN-FLO USES SMALL VOLUME OF AIR AT LOW PRESSURE

KEEPS BULK MATERIALS MOVING

BIN-FLO units in bins, chutes, hoppers, etc., restore flow characteristics to dry, finely ground materials which tend to pack or bridge in storage. Types for all materials and conditions. No moving parts; simple installation; negligible operating cost; no maintenance cost.

BIN-DICATOR the original diaphragm-type bin level indicator. In successful use for over 20 years. **ROTO-BIN-DICATOR** new, motor-driven paddle type; excellent on bins under pressure or vacuum, and for general application. Also explosion-proof units, U.L. listed.

THE BIN-DICATOR CO.
13946-A Kercheval • Detroit 15, Mich.

Write for detailed literature or call
VAlley 2-6952

WE SELL DIRECT • PHONE ORDERS COLLECT

▲ For more details circle NED-581 F9 on enclosed inquiry slip ▲

electric clutch for no-load starting

reduces horsepower requirements

Smaller motors and starters can be used if you equip your machine drives with Warner's new Electro-Sheave. But, the important advantages are: automatic clutching, faster cycling, and stepless torque modulation. You can install a complete, new electrical control system at a "packaged price." The Electro-Sheave combination clutch and pulley is a pre-engineered drive that mounts *in minutes* to any standard NEMA motor shaft. Write for Catalog No. P52.

WARNER

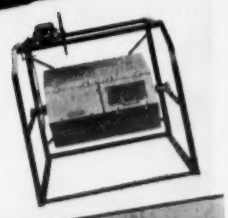
Warner Electric Brake & Clutch Co.
Beloit, Wisconsin

▲ For more details circle NED-582 F9 on enclosed inquiry slip ▲

H. W. Kramer

YOUR KEY TO BETTER FINISHING . . .

BUFFING LATHE
1 to 10 H.P. Ball Bearing V-Belt Drive. Pre-determined speed set at factory or to your specifications. Buffing wheels and compounds available for every industry . . . Special compounds recommended for Special applications.



SINGLE BARREL TUMBLER
Size: 30" x 36" or engineered to your specifications. Barrels lined with kiln-dried and glued maple. Child's play to operate. Economical on space as motors are individually mounted overhead—double decked or single. Tumbling supplies available also.

Write Dept. 12 for Detailed Information

H. W. KRAMER CO.
120-30 JAMAICA AVENUE
RICHMOND HILL 18, N. Y.

▲ For more details circle NED-583 F9 on enclosed inquiry slip ▲

Wood's

"LIFE-LUBE" BEARINGS

KEEP GREASE IN . . . DIRT OUT, HAVE LONG LIFE, LOW UPKEEP

Wood's permanently lubricated, "Life-Lube" ball bearing pillow blocks, flange and take-up bearings have a new and remarkably effective labyrinth seal and flinger assembly which keeps grease in and dirt out under the most adverse operating conditions. Sealed for life, they require no maintenance. Standard, high capacity, MRC 200 series ball bearings allow unrestricted alignment in any direction. WRITE FOR BULLETIN 7100.

T. B. WOOD'S SONS COMPANY
CHAMBERSBURG, PENNSYLVANIA
ATLANTA • CAMBRIDGE • CHICAGO • CLEVELAND • DALLAS

▲ For more details circle NED-584 F9 on enclosed inquiry slip ▲

▲ For more details circle NED-585 F9 on enclosed inquiry slip ▲

Have You Ever Seen So Much Quality in a Lathe... *at Such a Low Price?*

the NEW CLEARING-HARRISON

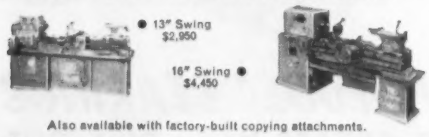
11" MODEL JUST $1,950*

*Base Price F.O.B. Chicago, Los Angeles and New York

Not only does the Clearing-Harrison look like a lathe that should cost 50% more than its list price, it *performs* that way. And it will continue to perform year after year as only a fine machine tool built to uncompromisingly high standards of precision can.

It has taper roller bearings in the spindle, hardened and ground ways, precision hobbed, heat treated nickel chrome gears. A removable section in the bed provides a gap giving a maximum swing of 18¾" on this 11" lathe. These and other fine features are found only in the Clearing-Harrison—sold and backed by Clearing division of U.S. Industries, Inc.

Delivery is immediate on this and on 13" and 16" lathes, too. Find out more about these and the many other benefits you get on the Clearing-Harrison. Write Clearing for details.



Also available with factory-built copying attachments.

Coast to Coast Service Facilities

Clearing's nationwide facilities assure you of prompt service always. Replacement parts and accessories are stocked at Clearing and are available thru all plants, at all service centers and thru all Clearing dealers.

Clearing, division of U. S. Industries, Inc., also manufactures the Clearing-Axelson line of engine lathes, power presses of all types, dies and special tooling, and special equipment for the aircraft and missiles industry.

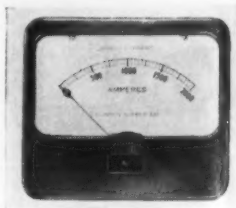
Write for Clearing-Harrison catalog.

USI Clearing Division of U. S. Industries, Inc. 6499 W. 65th Street • Chicago 38, Illinois

Plants in: Chicago, Ill. • Hamilton, Ohio • Los Angeles, Calif.

▲ For more details circle NED-586 F9 on enclosed inquiry slip ▲

AMMETERS & VOLTMETERS have rear screw calibration



Turning two screws at the rear of the meter case makes it possible to vary the setting of Clinton d'Arsonval ammeters and voltmeters by ±2.5 mv to compensate for lead lengths, magnetic environment, or any type or thickness of panel. This Cal-Adjust feature enables setting the moving-coil, direct-current meter accurately against a standard. Accuracy is 2 per cent full scale. Zero setting is on the front of the meter case. All industrial ranges are offered. Price is $12.50. Made by **Clinton Supply Co.**, Rectifier Mfg. Div., 110 S. Clinton St., Chicago 6, Ill.

▲ For more details circle NED-587 F9 on enclosed inquiry slip ▲

LENS CLEANING STATION prevents fogging in steam areas

Lenses of safety glasses, shields, masks, and other equipment are kept clean and fog-free in hot, steamy plant areas with this combination cleaner and antifog liquid. It is equally effective for use on the inside of windshields, windows, mirrors, refrigerated showcases, as well as on glass, plastic, and metal surfaces. Liquid is furnished as part of a wall-mounting cleaning station as shown, or in pint and gallon bottles, as well as a 4-oz squeeze spray bottle. Made by **Albert W. Pendergast Safety Equipment Co.**, 6924 Tulip St., Philadelphia 35, Pa.

▲ For more details circle NED-588 F9 on enclosed inquiry slip ▲

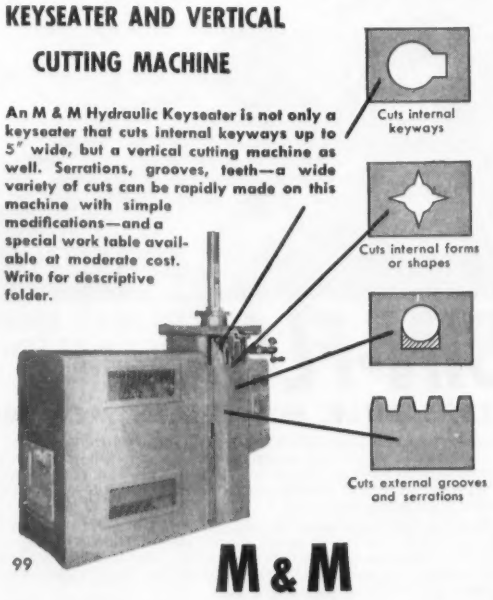
OVER-TRAVEL DAMPER controls undesirable forces

Eddy current field generated within the Model 1046 damper brings about smooth, consistant control of undesirable forces. Over-travel motions, oscillation, force surges, and unstable speeds are typical input forces which are controlled. An overload protective clutch of 80 lb-in. capacity may be externally adjusted to +10 per cent and −30 per cent. Damping torque is 80 lb-in./rad/sec, backlash is ¼ degree maximum, normal operating temperature range is −65 to 165° F, and weight is 3.2 lb. Made by **Lyndon Aircraft, Inc.**, 140-67 Clifford St., Newark 5, N. J.

▲ For more details circle NED-589 F9 on enclosed inquiry slip ▲

TRIPLE THE USEFULNESS OF YOUR M&M KEYSEATER AND VERTICAL CUTTING MACHINE

An M & M Hydraulic Keyseater is not only a keyseater that cuts internal keyways up to 5" wide, but a vertical cutting machine as well. Serrations, grooves, teeth—a wide variety of cuts can be rapidly made on this machine with simple modifications—and a special work table available at moderate cost. Write for descriptive folder.



99

M&M

KEYSEATERS AND VERTICAL CUTTING MACHINES

MITTS & MERRILL • 1000 So. Water St. • SAGINAW, MICH.

▲ For more details circle NED-590 F9 on enclosed inquiry slip ▲

COMMANDER TAPPERS

a Type and Size for Every Job!

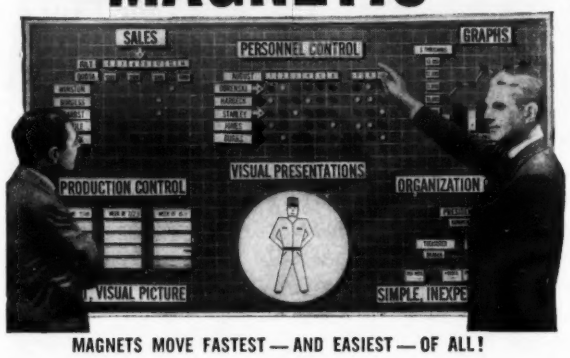
Commander Tappers are made in 10 models—each designed to handle tapping jobs over a wide range. From the Commander Tapper line, you can select the right unit to give you the exact performance your job requires. Whichever Commander Tapper you select, you will get unequalled performance and tapping economy. Sold and serviced by drilling and tapping specialists. Write for the Commander Production Tool Catalog and name of nearest Distributor.

Commander MFG. CO.

4220 WEST KINZIE STREET • CHICAGO 24, ILLINOIS

▲ For more details circle NED-591 F9 on enclosed inquiry slip ▲

VISUAL **MAGNETIC** CONTROL



MAGNETS MOVE FASTEST — AND EASIEST — OF ALL!

SIMPLEST VISUAL SYSTEM FOR
- Production
- Personnel
- Sales
- Maintenance
- Scheduling
- Machine Loading
- Charts—Graphs
- Visual Presentations

COLORFUL MAGNETIC ELEMENTS
- show facts instantly
- organize for action
- eliminate mistakes
- get the job done

PRICED FROM $38 INCLUDING MAGNETIC ELEMENTS

PRICE LIST & BROCHURE NE6 FREE ON REQUEST

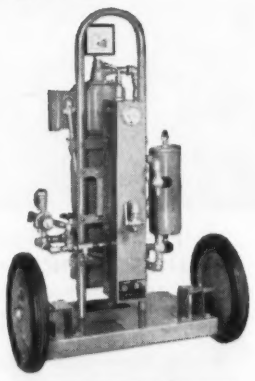
REPRESENTATION DESIRED IN SOME AREAS

Methods Research Corp.

442 Mosel Avenue, Staten Island 4, New York

▲ For more details circle NED-592 F9 on enclosed inquiry slip ▲

PORTABLE HOT-SPRAY OUTFIT for heavier coats... less overspray



Benefit fully from the time-saving, labor-saving, money-saving advantages of hot spray. Paint anywhere with a DeVilbiss Portable Heater.

DeVilbiss hot spray puts more paint on the surface with less wasteful overspray. For it thins paint with heat; allows easier atomization with up to 50% reduction in spraying pressure.

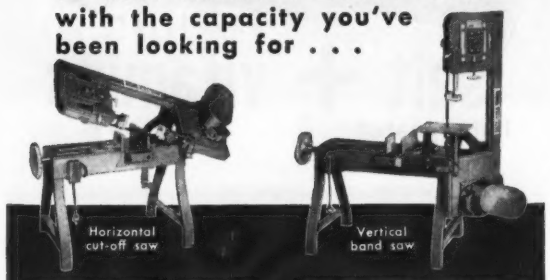
By applying heavier coats, you get the desired film-build with fewer passes over the surface. And the better flow-out of heated materials means smoother, glossier finishes, too. Call your DeVilbiss supplier, or write us today.

DEVILBISS

THE DEVILBISS COMPANY
Toledo 1, Ohio
Branch offices in Principal Cities

▲ For more details circle NED-593 F9 on enclosed inquiry slip ▲

The New WELLS MODEL 58-B
A CONVERTIBLE BAND SAW
with the capacity you've been looking for . . .



COMPACTLY BUILT • MODESTLY PRICED

Here's the all new Wells Model 58-B . . . a metal saw designed and built for double duty—double value. It's a compact, rugged, well guarded, extremely versatile unit . . . economically priced. As a horizontal cut-off saw, Model 58-B features quick-action vise (swivels to 45°); automatic shut-off; adjustable guides. Capacity: 6" x 10" rectangular shapes; 6" dia. rounds. For vertical use, swing head to upright position and install work table. Optional wheel-handle unit provides complete mobility. Write for complete information.

The Pioneers of Horizontal
Wells METAL CUTTING BAND SAWS
WELLS MANUFACTURING CORPORATION
1313 Harding Street • Three Rivers, Mich.

▲ For more details circle NED-594 F9 on enclosed inquiry slip ▲

if it hangs from a crane . . .
HEPPENSTALL CAN HANDLE IT

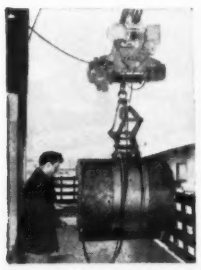
Automatic or manually operated tongs for any lifting or moving operation.

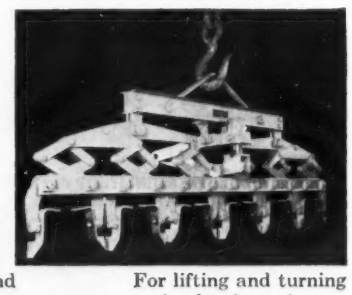
Loads of any shape, size or weight can be handled with speed, safety and economy by Heppenstall Tongs.

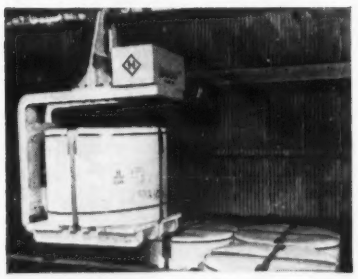
Special design features permit close, high stacking of raw materials and finished inventories with minimum aisle space.

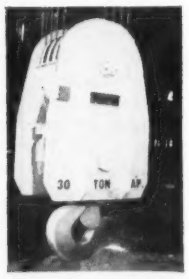
Other Heppenstall Tongs lift and turn objects simultaneously.

To protect finished surfaces, non-marring materials can be attached to gripping jaws.


For lifting circular and cylindrical objects.


For lifting and turning six aluminum ingots.


Double C Hook, for lifting palletized loads.

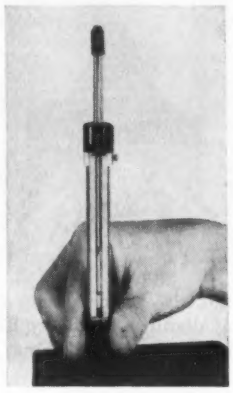

Motorized rotating crane hook.

Remember . . .
if it hangs from a crane, Heppenstall can handle it.

HEPPENSTALL COMPANY
PITTSBURGH 1, PENNSYLVANIA
Material Handling Division • New Brighton, Pa.
PLANTS: Pittsburgh, Pa. • Bridgeport, Conn. Indianapolis, Ind. • New Brighton, Pa.
MIDVALE-HEPPENSTALL COMPANY
NICETOWN, PHILADELPHIA 40, PA.
DIE BLOCKS • FORGINGS • BACK-UP ROLL SLEEVES • RINGS • INDUSTRIAL KNIVES • MATERIALS HANDLING EQUIPMENT

▲ For more details circle NED-595 F9 on enclosed inquiry slip ▲

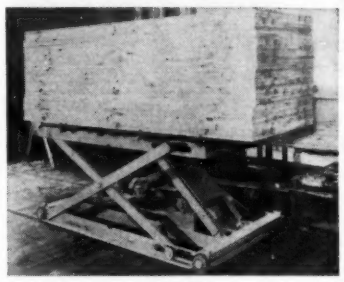
HARDNESS TESTER
pocket size unit weighs 9 oz



Consistently accurate readings within ±1 point Rockwell C are obtained with the Sklero portable hardness tester. Carried in a shirt pocket, it makes on-the-spot readings without moving the test piece. Operating on the rebound principle, the tester's readings can be converted to Rockwell, Shore, or Brinell on a handy conversion table. Pocket-size 7⅝ x 2⅝ x 1⅛-in. wooden case and instrument weigh 9 oz. Made by **Precise Products Corp.**, Blue River Road, Racine, Wis.

▲ For more details circle NED-596 F9 on enclosed inquiry slip ▲

HYDRAULIC LIFT TABLES
lift up to 5000 lb to 43 in.



Self-contained Upco hydraulic lift table will lift material loads weighing up to 5000 lb from a collapsed height of 9 in. to 43 in. Load is lifted at the center, placing no stress on cross arms. Side supports brace the load and give it more rigidity. Unit is controlled by three-way electric solenoid switch with foot or button control, and has lift speed of 2 ips. It is offered with wheel mounting, if desired, and with roller-equipped, flat, or concave table tops. Made by **United Products Co.**, 3001 N. Starr St., Tacoma 2, Wash.

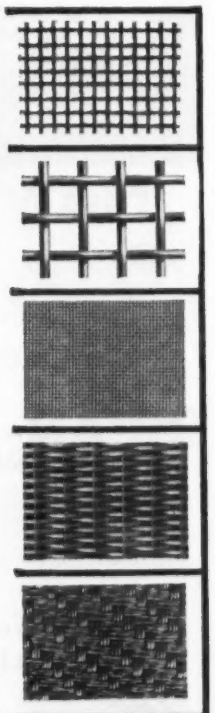
▲ For more details circle NED-597 F9 on enclosed inquiry slip ▲

GAS-FIRED WATER HEATER
recovery rate is 288 gph

Burkay 668 gas-fired water heater may be installed as a straight recovery heater, as a booster heater, or as part of an A. O. Smith-Burkay booster recovery or Shure-Temp booster recovery system. The coil type unit has an input of 300,000 Btu per hour and is approved for 180° F service. Recovery rate is 288 gph at 100° F rise. Of rust-free construction, it has a finned heat exchanger, and is available for use with natural, mixed, manufactured, and L-P gas. Made by **A. O. Smith Corp.**, Permaglas Div., Kankakee, Ill.

▲ For more details circle NED-598 F9 on enclosed inquiry slip ▲

WIRE CLOTH



ALL MESHES
ALL WEAVES
ALL MALLEABLE METALS
including
Monel, Nichrome*, Stainless Steels, Aluminum, Brass, Copper, Bronze, Nickel, Molybdenum, Titanium, Tantalum, Tungsten, Silver and other precious metals.
Rolls or cut to size. Send for literature.
*Driver-Harris Co.

Also
FABRICATED WIRE CLOTH PARTS
Strainers, Filters, Screens, Discs, etc.

NEWARK WIRE CLOTH COMPANY
351 Verona Avenue • Newark 4, New Jersey

▲ For more details circle NED-599 F9 on enclosed inquiry slip ▲

Comparative tests prove *Norgren* AIR LINE FILTERS
SAVE MAINTENANCE TIME

MAKE	NORGREN	A	B	C
Loose Parts to Disassemble	4	9	15	13
Tools Required for Maintenance	None	Wrench	Wrench & Screw-driver	Screw-driver
Tool Operations Required	None	2	10	16

If it's Norgren . . . It's Dependable.

WRITE FOR DESCRIPTIVE LITERATURE **C. A. NORGREN CO.**
3405 SOUTH ELATI STREET • ENGLEWOOD, COLORADO

▲ For more details circle NED-600 F9 on enclosed inquiry slip ▲

NOW . . . A LOW COST, HI-QUALITY, HORIZONTAL SPLIT CASE PUMP

Aqua Line PUMPS

PEERLESS PUMPS

IDEAL FOR HANDLING, BOOSTING, CIRCULATING HOT OR COLD WATER

The modern design of the Aqua Line means real pump value. You get traditional Peerless high-quality yet the Aqua Line is priced to compete. You get immediate availability, easy installation, low maintenance, and nation-wide service after the sale. Get the full story on this low cost high-quality pump. Write for literature today.

SIZES TO 8" • CAPACITIES TO 2600 GPM
HEADS TO 280 FT. • TEMPS TO 250°F.

Send for Bulletin B-2100

fmc FOOD MACHINERY AND CHEMICAL CORPORATION
Putting Ideas to Work
Peerless Pump Division
Plants: Los Angeles 31, Calif. and Indianapolis 8, Ind.

▲ For more details circle NED-601 F9 on enclosed inquiry slip ▲

For better products
LEAKPROOF . . . CUSHIONED TUFF-TITE FASTENERS

Undercut of Tuff-Tite fastener head . . .
. . . confines and controls flow of conical neoprene washer
. . . so washer seals the hole and cushions the fastener head!

Now you can • prevent leaks at fastener holes • protect fine finishes from fastener damage • stop vibration noises and squeaks

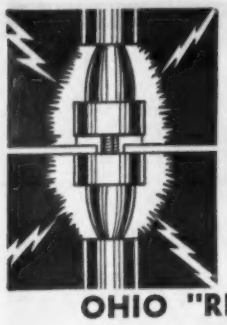
Leakproof, non-marring, shock and squeak absorbing! If you need these fastening advantages, you need National Tuff-Tite fasteners.

Standard National Tuff-Tite fasteners are available in hexagonal, pan, round and truss head styles for screw diameters No. 6 to ⅜" inclusive . . . maximum over-all length 1½". Standard fastener types are wood screws, self-tapping screws, thread cutting screws, machine screws and stove bolts. Tuff-Tite fasteners are pre-assembled with neoprene washers.

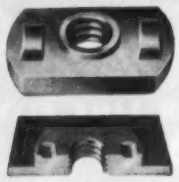
Washers are molded of neoprene which has a durometer hardness of 85 to 95. *Write for the Tuff-Tite fastener folder describing this line in detail.*

THE NATIONAL SCREW & MFG. COMPANY
CLEVELAND 4, OHIO
Pacific Coast: National Screw & Mfg. Co. of Cal.
3423 South Garfield Ave., Los Angeles 22, Cal.

▲ For more details circle NED-602 F9 on enclosed inquiry slip ▲



Note the strong dual line projections and precision pilot for easy locating



Note how the projections coalesce with parent metal providing a permanently positioned primary fastener

OHIO "RN" WELD NUT

FOR FASTER AND BETTER JOINING OF YOUR PRODUCT COMPONENTS.

This nut, which is applied by resistance welding, becomes the PRIMARY FASTENER in fastener assemblies. It offers these distinctive advantages:

- **LIGHTENING-FAST APPLICATION** (By resistance welding)
- **PRIMARY FASTENER PERMANENTLY POSITIONED** (No retapping required)
- **SPLIT-SECOND ASSEMBLY OF PRODUCT COMPONENTS** (Made possible by pre-attached primary fastener)
- **SHIPMENT FROM STOCK**

Samples and information furnished upon request.

The Primary Fastener in Fastener Assemblies

THE OHIO NUT AND BOLT CO.
14 FIRST STREET BEREA, OHIO

For more details circle **NED-603 F9** on enclosed inquiry slip

Wears like STEEL!

Protects like RUBBER!

NEW DURALAST WHEEL BY HAMILTON OUTWEARS RUBBER 5 to 1! . . . Saves up to 500% in tire replacement costs on trucks and trailers!

TOUGH, synthetic urethane treads resist abrasion, chunking and tearing. Chemically inert . . . oil, grease, water and brine resistant!

RESILIENT, noiseless, non-marking! DURALAST Wheels roll easily under loads double those permitted by rubber. Withstand severe shocks . . . resist formation of "flat spots" under static load!

COMPLETE floor protection! Ends wheel damage to factory floor.

AVAILABLE for replacement on present equipment, or for new trucks and casters. Wheel sizes from 4" to 12" diameter . . . straight or tapered roller bearings, or plain bore.

WRITE NOW FOR FREE BULLETIN!

THE **Hamilton** CASTER & MFG. CO.
1763 Dixie Highway, Hamilton, Ohio

For more details circle **NED-604 F9** on enclosed inquiry slip

CHICAGO TRAMRAIL

JIB CRANES

Faster Handling

AT LESS COST

360° SWING

SELF-SUPPORTING

CAPACITIES FROM 1½ TO 5 TONS

A complete line of Jib Cranes including Wall Bracket Type with 180° rotation, Self-Standing Column Type with 220° rotation; also heavy duty and light duty Self-Supporting Type with 360° rotation. Mast type with top and bottom supports. Top bearing is bronze and a tapered precision bearing is at bottom.

CHICAGO TRAMRAIL CORPORATION
1310 S. Kostner Avenue • Chicago 23, Illinois

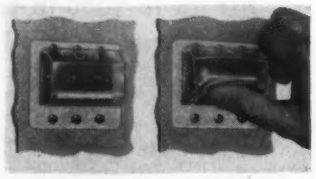
For more details circle **NED-605 F9** on enclosed inquiry slip

TURRET HEAD
5-position model for drill presses

Drilling, reaming, countersinking, counterboring, and tapping are five different operations that can be performed on one drill press with the Quindrill five-position turret head. Set-up need not be altered to change operation. Sizes to fit most drill presses, including 15 and 20-in. Delta models with Morse and Jacobs taper spindles, are available. Made by **Chicago Quadrill Co.**, 1846 Busse Highway, Des Plaines, Ill.

For more details circle **NED-606 F9** on enclosed inquiry slip

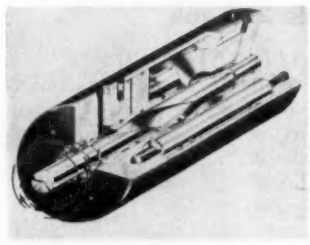
FLEXIBLE SEALED COVERS
made of tough, transparent silicone



Flexible windows, lenses, or transparent bellows to cover switches, control panels, and other moving parts can be made of Rubrglas, a tough glass-clear silicone. Material has an elongation of 500 per cent, a temperature range of −160 to 500° F, and is resistant to acids, ozone, and sunlight. Visual inspections and mechanical adjustments can be made on hot or cold mechanical and electrical devices without exposing the controls or removing the Rubrglas-Seel. Illustrated Heinemann circuit breakers are being actuated through a cover. Made by **A.P.M. Corp.**, Rubrglas Dept., 252 Hawthorne Ave., Yonkers, N. Y.

For more details circle **NED-607 F9** on enclosed inquiry slip

ROTARY TORQUE ACTUATOR
provides 0 to 370-degree rotation



Powered by air, gas, water, or oil, the improved rotary torque actuator seals dead tight and will not back off under tension, shock, vibration, or complete power failure. Cushioning provides smooth, controlled deceleration at the end of clockwise and counterclockwise 0-to-370-degree rotation cycles. Extra five degrees of rotation are provided at either end of these quadrants of rotation: 0 to 100, 0 to 190, 0 to 280, and 0 to 370 degrees. Bore sizes are 4, 5, 6, 8, 10, and 12 in. Applications include positioning of various kinds, indexing, cam actions, valve operations, swing motions, agitation, clamping, and maintaining constant tension. Made by **Carter Controls, Inc.**, 2876 Bernice Rd., Lansing, Ill.

For more details circle **NED-608 F9** on enclosed inquiry slip

EXCLUSIVE* with Steinen

New Nozzles

TAN-JET
SOLID CONE NOZZLES

Non-clogging nozzles having a uniform solid-cone spray pattern, furnished in brass, steel, 303 stainless or other suitable materials for any application or process which involves spraying of fluids. Sizes ¼"—⅜"—½" male or female conn.

*SPAN-JET
FLAT SPRAY NOZZLES

For spraying or washing inside of tubular units or other uses where a circular wide-angle spray is needed. Made in two patterns — 160° hollow-cone spray or 180° flat — circular spray. Available in brass or 303 stainless steel — others on request. Sizes ⅛" — ¼" — ⅜" male conn.

Write for your *FREE CATALOG TODAY*

WM. STEINEN MFG. CO.
INDUSTRIAL NOZZLE DIVISION
39-45 Bruen Street, Newark, New Jersey

SERVING INDUSTRY FOR MORE THAN FIFTY YEARS

For more details circle **NED-609 F9** on enclosed inquiry slip

prevent heat fatigue restore vigor

salt + vitamins

impregnated tablets **B_1 B_2 and C**

In hot weather, most people eat less — thus fail to supply the body with enough vitamins or salt.
Now — "Pep-Ups" with BOTH vital elements help your workers maintain full physical efficiency.

Hold down the Hot Weather Rise in Accident Rates with

"Pep-Ups" with Vitamins	Cat. No.
500-tablet Dispenser	1414
1000-tablet Dispenser	1424
1500-tablet bulk Carton	1431

Each salt crystal impregnated to PREVENT SALT SICKNESS
Also available in Regular Impregnated without Vitamins; and Enteric Coated

Fully meet Federal Spec. SS-S-31F

"Pep-Up"® *The Original and Highest Quality*
IMPREGNATED SALT TABLETS

with VITAMINS ADDED
In sanitary, expendable dispensers of durable Styrene
AT NO EXTRA COST

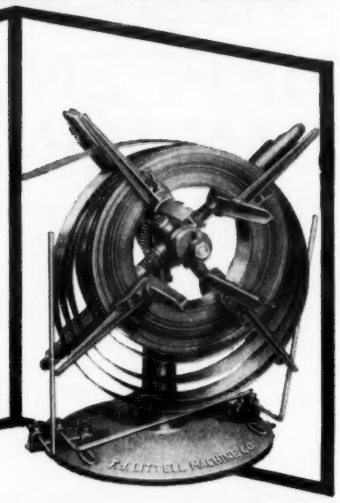
UNITED STATES SAFETY SERVICE CO.
DIV. E-6 1535 WALNUT ST., KANSAS CITY, MO.
Canada: Parmelee, Ltd., Toronto & Montreal

For more details circle **NED-610 F9** on enclosed inquiry slip

LITTELL REELS

Single and Double Reels In the Small and Medium Range, for coils of 100 lbs. to 10,000 lbs.

Today's order ships tomorrow!



All the famed Littell ease of loading, automatic centering, and smooth, accurate unwinding . . . plus new, fast delivery! Plain and motor driven. Write for full information.

F. J. LITTELL MACHINE CO. — Speed with safety
SERVING USERS OF COIL STOCK — Branches: Detroit Cleveland

Ask for Catalog "D"

4169 N. RAVENSWOOD AVE., CHICAGO 13, ILL.

For more details circle **NED-611 F9** on enclosed inquiry slip

NEW
TROUBLE-FREE STEAM CLEANER

The Turbo Steam Cleaner is made for continuous rough service. It takes care of all cleaning, degreasing, paint-stripping and phosphatizing jobs faster, better and cheaper than any other steam cleaner. Quickly pays for itself: Low fuel consumption; detergent savings; low maintenance. Simple construction. Many automatic safety features. Nothing cleans like steam and no steam cleaner cleans like a Turbo. Oil-fired and electric models. Send for illustrated folder.

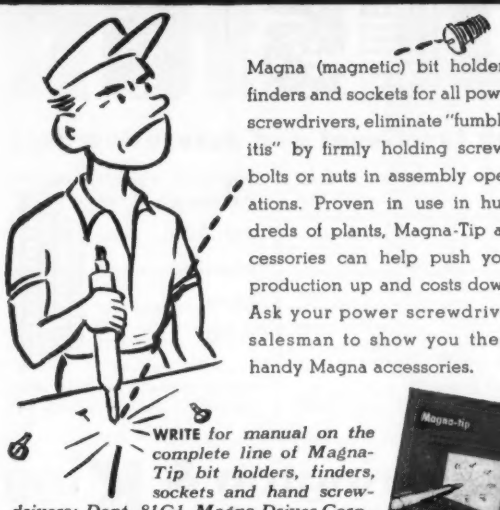
TURBO STEAM CLEANERS

TURBO MACHINE COMPANY, LANSDALE, PA.

For more details circle **NED-612 F9** on enclosed inquiry slip

STOP "FUMBLEITIS" WITH

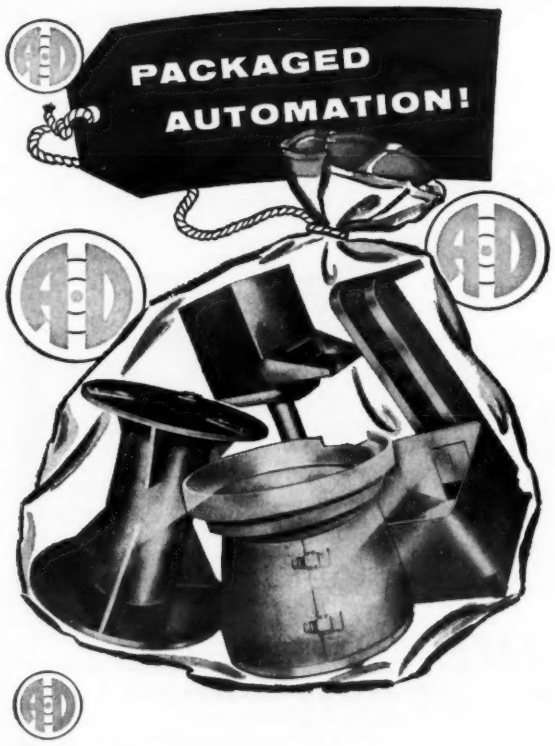
Magna-tip® MAGNETIC SCREW DRIVING ACCESSORIES



Magna (magnetic) bit holders, finders and sockets for all power screwdrivers, eliminate "fumbleitis" by firmly holding screws, bolts or nuts in assembly operations. Proven in use in hundreds of plants, Magna-Tip accessories can help push your production up and costs down. Ask your power screwdriver salesman to show you these handy Magna accessories.

WRITE *for manual on the complete line of Magna-Tip bit holders, finders, sockets and hand screwdrivers: Dept. 81G1, Magna Driver Corp., 779 Washington St., Buffalo 3, N. Y.*

▲ For more details circle **NED-613 F9** on enclosed inquiry slip ▲

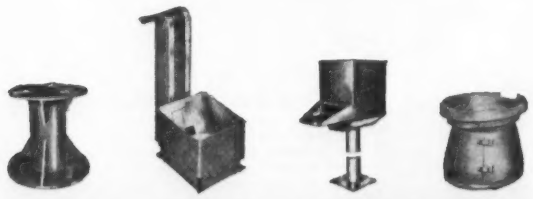


Achieve efficient, automatic production, and produce more all along the line, by integrating equipment designed and built by AUTOMATION for automation.

For example, vibratory parts feeders perform more efficiently on an engineered base permitting maximum power transmission. Either the side delivery or the elevating conveyor supply hoppers (with automatic paddle type relay switch to regulate delivery) hold large quantities of parts and are real labor savers. These are just a few advantages that make automation work and pay for itself.

You can depend on the proven talents at AUTOMATION DEVICES, INC.—enlist their help. Write today for the informative bulletin on "Packaged Automation."

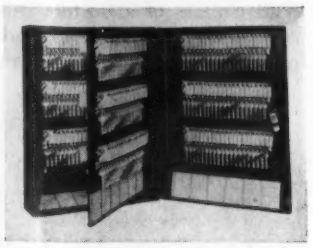
PEECO & VFC DIVISIONS... TWO GREAT NAMES IN PARTS FEEDING



AUTOMATION DEVICES INC.
ERIE, PENNSYLVANIA

▲ For more details circle **NED-614 F9** on enclosed inquiry slip ▲

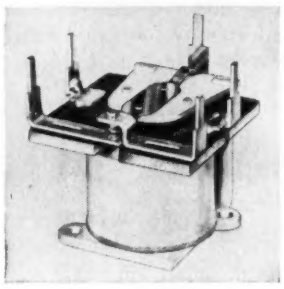
KEY CABINETS
in 20 to 800-key capacities



Keys stored in Ke-Master cabinets are indexed in the same sense that letters are filed and books are catalogued. Keys are attached to vulcanized fiber tags which hang neatly aligned on spiral wires to show their file numbers. Each tag is positioned according to a consecutively numbered location guide. Responsible persons know at any time who has the key to any lock. Welded steel cabinets range in capacity from 20 to 800 keys and are finished in gray, light green, or tan. Made by **Cushman & Denison Mfg. Co.**, 730 Garden St., Carlstadt, N. J.

▲ For more details circle **NED-615 F9** on enclosed inquiry slip ▲

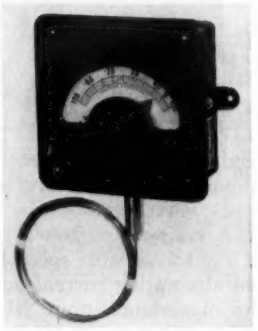
MIDGET DC RELAY
for use in printed circuits



Standard operating voltage of this single - pole double-throw relay is 3 to 24 v dc. Designed for use in printed circuitry where it is self-supporting, the relay has a resistance range of 8500 ohms and power requirement of 0.1 w. Standard contact rating is up to 1 amp, 50 v dc, resistive. Solder-hole termination is also offered. Made by **Price Electric Corp.**, 5560 Church, Frederick, Md.

▲ For more details circle **NED-616 F9** on enclosed inquiry slip ▲

TEMPERATURE CONTROL
indicates over −100 to 600° F range



Temperatures of gases, liquids, and hotplates are indicated and controlled by the Type E36N indicating temperature control. Available in ranges from −100 to 600° F, it is suited for centrifuges, sterilizers, ovens, and similar equipment. Easy reference between setting and controlling temperatures is provided by using a single scale and two pointers. Normally-open, normally-closed, and double-throw single-pole switches are suitable for up to 180° F ambient. Ratings are 15 and 20 amp, 115/230 v ac. Price is $55. Made by **United Electric Controls Co.**, 79 School St., Watertown 72, Mass.

▲ For more details circle **NED-617 F9** on enclosed inquiry slip ▲

Improved Sealtite E. F.

Sealtite type E.F.* – the original flexible, liquid-tight conduit, first to meet J.I.C. requirements – is now better than ever. New design has made it stronger, tougher, more durable in service . . . easier to install. Heavier extruded PVC jacket offers greater resistance to abrasion, cutting and tearing . . . greater oil resistance . . . greater holding power for fittings. It is more flexible – permits smaller bending diameters. New convenient markings save time, prevent waste. Length is indicated by arrows at 1-foot intervals. Trade size in inches is shown on cover. In black or gray. For free sample and more information, write: Anaconda Metal Hose Division, The American Brass Company, Waterbury 20, Conn.

*Pat. Applied For 59146

SEALTITE® flexible, liquid-tight conduit
an **ANACONDA®** product

▲ For more details circle **NED-618 F9** on enclosed inquiry slip ▲

HAVE YOU A TOOL PROBLEM?

HUNTER HAS THE SOLUTION!!!

HUNTER TOOLS — FREE.. BIG 32 PAGE ILLUSTRATED • TECHNICAL CATALOG
9851 ALBURTIS
SANTA FE SPRINGS, CALIF.

▲ For more details circle **NED-619 F9** on enclosed inquiry slip ▲

FREE!

NEW IDEA BOOK ON SPRAY PAINTING

- Construction Painting
- Production Painting
- Contract Spraying
- Multi-color Painting
- Maintenance Painting—interior and exterior

Here's the finest reference in the field! It's packed with pictures, loaded with charts, diagrams, tables of facts and figures. You *need* Graco's new book to learn about Graco's new equipment. Send for your *free* copy today.

GRACO ENGINEERS AND MANUFACTURERS
GRAY COMPANY, INC. • 67 Graco Square • Minneapolis 13, Minn.

(See Phone Book Yellow Pages, Spraying, for Local Graco Suppliers)

▲ For more details circle **NED-620 F9** on enclosed inquiry slip ▲

Features information* NEVER AVAILABLE BEFORE *in slide chart form

For the first time, with slide chart ease, convenience, and accuracy, you can put your finger quickly on a host of facts such as *speeds and feeds for machining, drilling and threading* stainless steels.

Second side is an up-to-date version of Carpenter's earlier issue Slide Chart. Contains all you need know to select the proper stainless for *drawing, forging, heading, welding, roll forming*, etc. Get your copy of this pocket-size reference today!

THE CARPENTER STEEL COMPANY
118 W. Bern St., Reading, Pa.

Please send me a copy of your new Carpenter Stainless Slide Chart. (Please print)

Company Name_____
Individual Name_____ Title_____
Address_____
City_____ Zone_____ State_____

▲ For more details circle **NED-621 F9** on enclosed inquiry slip ▲

From high vacuum to 20,000 PSI and −85°F. to +360°F., only Stat-O-Seals offer safe, sure, effective sealing using the principle of controlled confinement of the seal plus **mechanical** bonding.

They will not "twist" in installing and there's no chemical bonding agent that can be attacked by corrosives . . . and: metal-to-metal contact; quick, visual inspection; simple, one-piece assembly; re-useable; o-ring style configuration for versatility and freedom from damage.

By the makers of Parker O-rings and Gask-O-Seals.

Parker SEAL COMPANY
CULVER CITY, CALIF. • CLEVELAND, 12, OHIO
A DIVISION OF Parker Hannifin CORPORATION

▲ For more details circle **NED-622 F9** on enclosed inquiry slip ▲

Stop Corrosion "Cold" at Red Hot Heats!

MARKAL "S-R" COATINGS—
give permanent protection to metals against corrosion, oxidation and scaling at temperatures as high as 2200°.

You can use "S-R" on a wide variety of applications such as stacks, retorts, furnaces, ducts, kilns, exhausts, mufflers, manifolds and many others. There's no peeling or cracking even during sudden temperature changes.

Markal "S-R" is easy to use, can be brushed or sprayed.

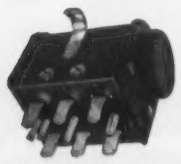
WRITE on company letterhead for complete information, literature and recommendations.

MARKAL . . . The Mark of Quality

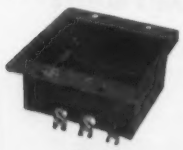
MARKAL COMPANY
3053 West Carroll Avenue Chicago 12, Illinois

▲ For more details circle **NED-623 F9** on enclosed inquiry slip ▲

For **HEAVY DUTY WORK!**
Severest Electrical Services



P-506-CE—Plug with Cap



S-506-DB
Socket with deep Bracket

JONES PLUGS & SOCKETS
500 SERIES
Proven Quality!

For 5,000 Volts, 25 Amperes per Contact Alterable by circuit Characteristics.

Socket contacts of phosphor bronze, knife-switch type, cadmium plated. Plug contacts hard brass, cadmium plated. Made in 2, 4, 6, 8, 10 and 12 contacts. Plugs and sockets polarized. Long leakage path from terminal, and terminal to ground. Caps and brackets, steel parkerized *(rust-proofed)*. Plug and socket blocks interchangeable in caps and brackets. Terminal connections most accessible. Cap insulated with canvas bakelite.

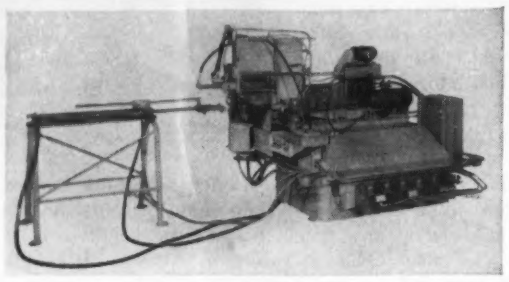
Write for Jones BULLETIN 22 for full details on line.

Jones
HOWARD B. JONES DIVISION
CINCH MANUFACTURING COMPANY
CHICAGO 24, ILLINOIS
DIVISION OF UNITED-CARR FASTENER CORP.

▲ For more details circle **NED-624 F9** on enclosed inquiry slip ▲

AUTOMATED TUBE BENDER produces 1800 U-bends per hour

With a press of a button, this automated tube bender feeds tubes into position, bends them, and removes the formed tubing without attendance other than keeping

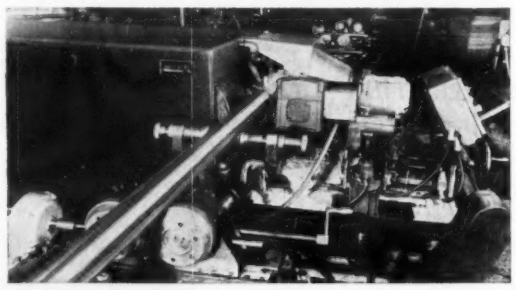


tube supply conveyor or hopper filled. Bending dies are self-compensating and hydraulically actuated. Two tubes can be processed during each operating cycle. Machine produces flat-back U-bends at rate of 1800 per hour, or conventional return bends at 980 per hour. Features are an audible alarm that warns of depleted tube supply, a speed and rotation control of the hydraulic bending cycle, and pressurized lubrication, including internal lubrication of tubes and mandrels. Made by **Wallace Supplies Mfg. Co.**, 1304 Diversey Parkway, Chicago 14, Ill.

▲ For more details circle **NED-625 F9** on enclosed inquiry slip ▲

ROD & TUBE BELT GRINDER takes 1 to 9-in. diameters, feeds them at 2½ to 20 fpm

Heavy single-pass stock removal, quality finishes, and close tolerances are possible on ferrous and nonferrous metals and other materials with the Model 8132-HD

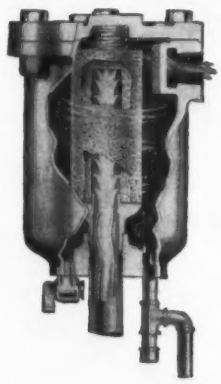


centerless belt grinder. It accommodates 1 to 9-in. diameter stock of any length. Average through-feed rates vary from 2½ to 20 fpm.

A powered outboard support mechanism consists of a 7½-hp variable speed main power unit which drives an alternating current generator and seven 60-cycle, 1-hp maximum output "slave" drive units which power the regulating wheel and power feed stands. The 8 x 132-in. abrasive belt operates at 4500 sfpm. Also incorporated are air-belt tensioning, 50-hp belt drive unit, and 200-gal recirculating coolant system with ½-hp pump. Made by **Engelberg, Inc.**, 831 W. Fayette St., Syracuse 4, N. Y.

▲ For more details circle **NED-626 F9** on enclosed inquiry slip ▲

ADAMS PORO-STONE AIR FILTER, designed to remove oil, water and foreign matter from compressed air lines with minimum pressure drop.



The R. P. Adams Poro-Stone air filter is engineered to efficiently remove entrained oil, water and pipe scale from compressed air lines. Liquid droplets and solids being carried by the gas stream are first removed by centrifugal action in an annular chamber. Secondary filtration is achieved by passing the air or gas stream through a poro-stone unit. An automatic trap can be provided to discharge the residue from the cyclone chamber.

At rated capacity the filters operate at a maximum pressure drop of only ½ lb., thus insuring delivery of line pressure to the point of consumption.

The units require virtually no service or maintenance—thereby insuring continued trouble-free, low cost performance.

ADAMS Poro-Stone air filters are available from stock in sizes to suit your needs. For further information, write today for Bulletin 117, R. P. Adams Co., Inc., 227 East Park Drive, Buffalo 17, New York. *Advt.*

▲ For more details circle **NED-627 F9** on enclosed inquiry slip ▲

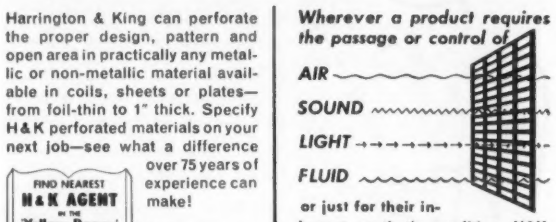
H&K perforated materials
a perfect medium of
DESIGN
with functional and decorative uses

Harrington & King can perforate the proper design, pattern and open area in practically any metallic or non-metallic material available in coils, sheets or plates—from foil-thin to 1" thick. Specify H&K perforated materials on your next job—see what a difference over 75 years of experience can make!

FIND NEAREST H&K AGENT in the Yellow Pages

Listed Under "Perforated Metals"

Wherever a product requires the passage or control of



or just for their inherent aesthetic qualities, H&K perforated metals can serve you

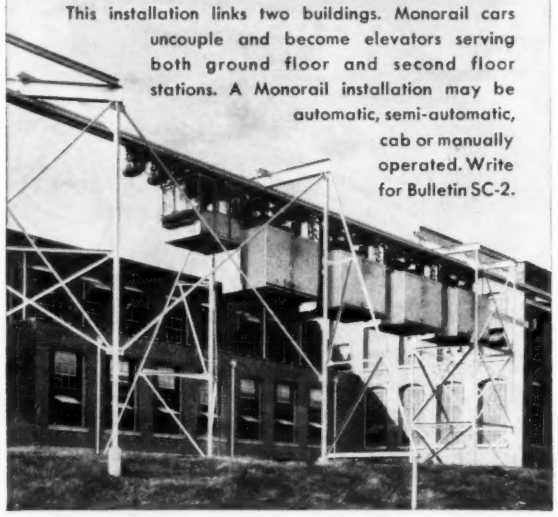
Write for General Catalog No. 75, Today!

THE Harrington & King PERFORATING CO. INC.
Chicago Office and Warehouse • *New York Office and Warehouse*
5658 Fillmore St., Chicago 44 114 Liberty St., Dept. NED, New York 6

▲ For more details circle **NED-628 F9** on enclosed inquiry slip ▲

TOUGH HANDLING
made easy . . . Both indoors and outdoors American Monorail moves loads safely overhead—no traffic jams—no interference with production.

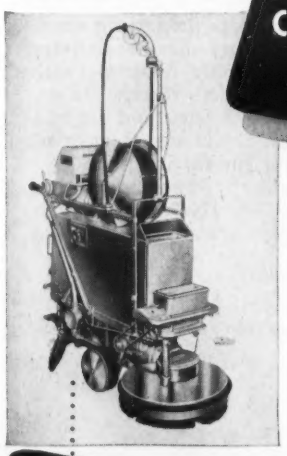
This installation links two buildings. Monorail cars uncouple and become elevators serving both ground floor and second floor stations. A Monorail installation may be automatic, semi-automatic, cab or manually operated. Write for Bulletin SC-2.



AMERICAN MONORAIL
13116 ATHENS AVENUE
CLEVELAND 7, OHIO

▲ For more details circle **NED-629 F9** on enclosed inquiry slip ▲

Self-Propelled SCRUBBER-VAC.... .... CUTS CLEANING TIME 2/3!



For **Small-Area Factories (2,000 to 15,000 sq. ft. of floor)**
Finnell's 418P Electric Combination Scrubber-Vac, with its 18" brush spread, cleans floors in about *one-third the time* required with a conventional 18" machine and separate vac. Also can be used for polishing, etc. Available on lease or purchase plan. (Powder Dispenser is an accessory.)

Applies cleanser, scrubs, and picks up — in ONE operation!

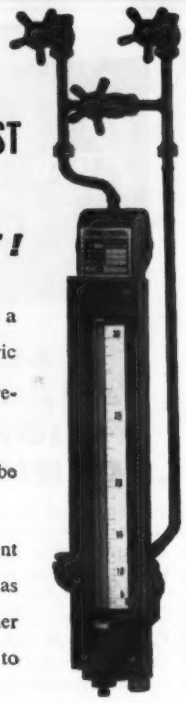
FIND OUT WHAT YOU WOULD SAVE . . . with a *Finnell Scrubber-Vac. Finnell* makes a full range of sizes, and *gasoline* or *propane* as well as *electric* models. For demonstration, consultation, or literature, phone or write nearest *Finnell Branch* or Finnell System, Inc., 5506 East Street, Elkhart, Indiana.

FINNELL SYSTEM, INC.
Originators of Power Scrubbing and Polishing Machines
FINNELL
BRANCHES IN ALL PRINCIPAL CITIES

▲ For more details circle **NED-630 F9** on enclosed inquiry slip ▲

LONG-TERM ACCURACY IN A LOW-COST FLOWMETER?

MERIAM HAS IT!



Long-term accuracy is part and parcel of a Meriam Flowmeter. For a Meriam Flowmeter operates on the inherently accurate manometric principle.

It's also a simple device: no pressure-tight bearings, no magnetic followers, no calibration problems.

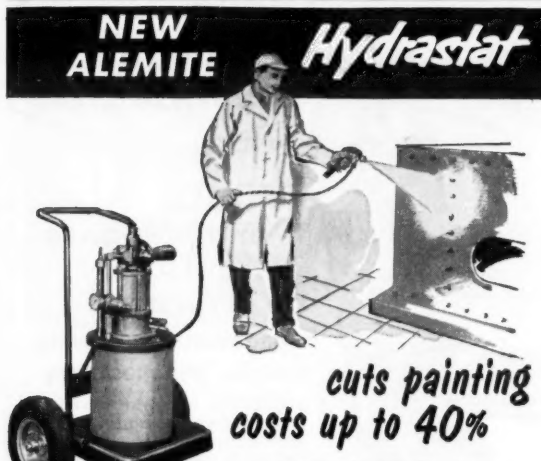
With the orifice installed in the pipeline, the flowmeter can be located at almost any convenient reading location.

The Type H Flowmeter, shown here, is a rugged, all-steel instrument that will handle pressures to 250 psig, differentials to 160" water. It has no moving parts, is easy to install, requires little maintenance. Other models share these virtues, too; the largest are made for pressures to 1000 psig, differentials to 800" water. Request Bulletin 18-A.

The MERIAM Instrument Company
10920 Madison Avenue, Cleveland 2, Ohio

▲ For more details circle NED-631 F9 on enclosed inquiry slip ▲

NEW ALEMITE Hydrastat



cuts painting costs up to 40%

- Speeds production . . . minimizes housekeeping . . . increases safety.
- Puts paint only where you want it! Atomizes paint by high pump pressure—without use of heat, without atomizing air!
- Virtually eliminates overspray and bounceback . . . reduces air equipment and air consumption.

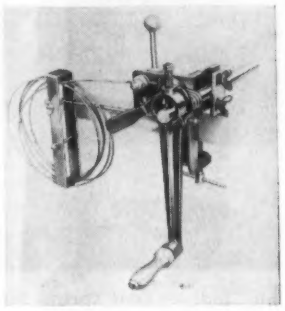
Write for new illustrated literature!

Symbol of SW Excellence — ALEMITE DIVISION STEWART-WARNER CORPORATION

Dept. AI-69, 1850 Diversey Parkway, Chicago 14, Illinois

▲ For more details circle NED-632 F9 on enclosed inquiry slip ▲

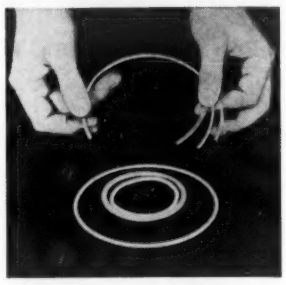
SPRING WINDER
makes three types in varying sizes



Extension, compression, and torsion springs are easily and accurately wound in either right or left hand coils with the Porter spring winder. It makes all sizes from 1/8 to 1 1/4-in. ID in any length from fine music wire up to 3/16-in. diameter tempered spring wire. Winder is used by unskilled personnel, and clamps on a workbench or is held in a vise. A pitch gage regulates the distance between coils, and a cam-lock tension release accurately duplicates tension in springs produced in quantities. Made by **Advance Car Mover Co.**, Appleton, Wis.

▲ For more details circle NED-634 F9 on enclosed inquiry slip ▲

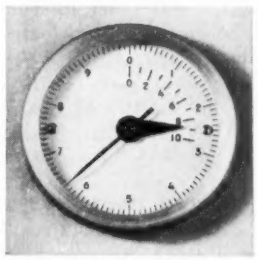
SIILCONE O-RINGS
covered with Kel-F plastic



High chemical resistance, low coefficient of friction, and good thermal characteristics are features of Kel-F covered silicone O-rings. They will not swell after prolonged exposure to concentrated acids, aqua regia, caustics, or most organic solvents and can be used at temperatures up to 300° F. O-rings will not extrude into gaps between pistons and cylinders at pressures up to 1500 psi. Compression recovery, even at extreme temperatures, is exceptionally good. Made by **Fluoro-Plastics, Inc.**, 2417 Federal St., Philadelphia 46, Pa.

▲ For more details circle NED-635 F9 on enclosed inquiry slip ▲

DIAL COUNTER
used as servo position indicator



Constant torque over the entire range is a feature of this dial type counter, used as a position indicator for servo systems. It has two concentric pointers and large index marks and numbers on a bright white face, and a red sweep pointer. Coarse point is back geared to the input shaft and has a 10:1 ratio for analog and 36:1 ratio for angle function applications. Unit is directly readable to 0.00 and by interpolation to 0.0000. Semiflush bezel allows front-of-panel mounting. Bezel diameter is 3 9/16 in. and maximum protrusion is 9/16 in. Made by **D. S. Plumb Co.**, 77 Norfolk St., Newark 3, N. J.

▲ For more details circle NED-636 F9 on enclosed inquiry slip ▲

Your Problems in moving AIR DUST FUMES AND MATERIALS easily solved with FLEXAUST® HOSE

Both Flexaust hose and Portovent retractable duct are made of neoprene coated fabrics and wire reinforced, and have service-proven their dependability and durability in thousands of installations since 1938. Easy to cut, couple, connect, reuse, relocate, they can be installed in minutes to give years of service. Sizes from 1 1/4 to 36" i.d.

WRITE TODAY FOR DETAILS
"Distributors in all principal cities"
THE FLEXAUST COMPANY
Dept. NED-6 100 Park Avenue, New York 17, N. Y.

▲ For more details circle NED-637 F9 on enclosed inquiry slip ▲

Robert Harding, right, assistant chief engineer of Arma division, American Bosch Arma Corporation, points out to Frank McShane, cost-improvement expert, the high quality and contrast of an 11" x 17" stock print reduced from an original 22" x 34" drawing. The print is a sample of many run off on an offset duplicator from an inexpensive offset paper master prepared xerographically by XeroX Model 1218 copying equipment.

thanks to XEROGRAPHY... ARMA SAVES $82,000 YEARLY

...*reproducing*
- *engineering drawings*
- *drawing-change notices*
- *specifications sheets*
- *parts lists*

Arma Division, American Bosch Arma Corporation, is saving $82,000 a year in the rapid reproduction of engineering drawings, drawing-change notices, specification sheets, and parts lists. Arma manufactures midget brains for missiles and other intricate electronic devices.

The $82,000 economy results from the installation of XeroX® Model 1218 copying equipment and offset duplicating to supplant conventional drawing-reproduction methods.

XeroX Model 1218 copying equipment, operating on the principles of xerography—clean, fast, dry, electrostatic—prepares inexpensive offset paper masters from original engineering drawings of A to D size.

The larger drawings are reduced with fine legibility to 12 x 18" masters, from which multiple prints are quickly run off on offset duplicators.

The quality of copies is superb. Yet, prints cost so little that engineers are encouraged to discard them after use, rather than re-file them.

Drawing-change notices now reach production lines and suppliers faster than ever before.

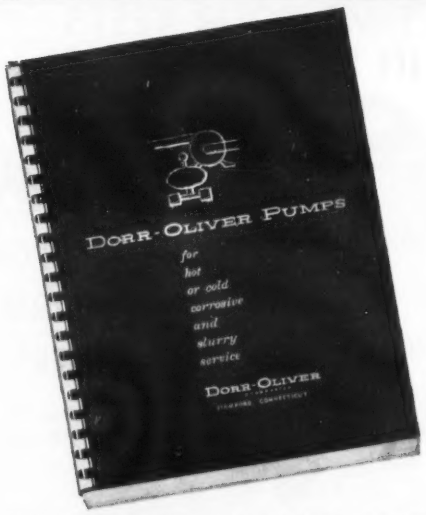
An Arma engineering library of expendable drawings provides prints, run off in advance of actual need, for engineers' self-service availability.

Xerography can help *you*, too. Write for proof-of-performance folders showing how companies of all kinds and sizes are speeding paperwork duplicating and saving thousands of dollars yearly by xerography.

HALOID XEROX INC.
59-209X Haloid St., Rochester 3, N. Y.
BRANCH OFFICES IN PRINCIPAL U. S. AND CANADIAN CITIES
Overseas: Rank-Xerox Limited, London, Eng.

HALOID XEROX®

▲ For more details circle NED-638 F9 on enclosed inquiry slip ▲



REPRESENTATIVES AND DISTRIBUTORS

Equipment Engineers Inc.
331 E. Lancaster Ave., Wynnewood, Pa.
Tel.: Trinity 7-2539

John J. Round, Jr.
627 Main St., Wakefield, Mass.
Tel.: Crystal 9-4541

Chemical Pump & Equipt. Corp.
75 West St., New York 6, New York
Tel.: BO 9-7544

The Cunningham Company
101 Investment Bldg., Pittsburgh, Pa.
Tel.: Court 1-7092

Chemical Pump & Equipt. Corp.
3537 Lee Road, Cleveland, Ohio
Tel.: Longacre 1-3025

Engineering Corporation of Baltimore
409-11 S. Caroline St., Baltimore, Md.
Tel.: Dickens 2-1440

West Virginia Pump & Supply Co.
222 Fourth Ave., Huntington, West Va.
Tel.: Jackson 2-4360

Shutt Process Equipment Corp.
5627 Manchester Ave., St. Louis, Mo.
Tel.: Mission 7-0908

Kerr Machinery Company
Kerr Bldg., Corner of Ft. and Beaubien Sts.
Detroit, Michigan
Tel.: Woodward 1-0590

The Galigher Company
545 W. 8th South St., Salt Lake City, Utah
Tel.: Elgin 9-8731

The O'Neill Pump & Engineering Co.
601 E. Franklin St., Richmond, Va.
Tel.: Milton 4-4828

R. V. Gildersleeve Company
P. O. 2623, Baton Rouge, La.
Tel.: Dickens 3-2338

Rittelmeyer & Company Inc.
150 Nassau Street N.W., Atlanta 1, Ga.
Tel.: Jackson 4-1531

Brown & Morrison
207 Liberty Life Bldg., Charlotte 2, N. C.
Tel.: Ed 3-0774

M. N. Dannenbaum Company
P. O. 14496, Houston 21, Texas
Tel.: Walnut 3-7655

Paco Engineering Company
6578 Broadway, Alden, New York
Tel.: Regent 3526 (Buffalo)

ALL YOU WANT TO KNOW ABOUT PUMPS for corrosive and slurry service

Complete engineering data—dimensions, performance curves, parts lists and specifications on the entire Dorr-Oliver line of alloy metal, lined and diaphragm-type pumps—*all in one big bulletin!* Here's everything you need to solve difficult pumping problems . . . just off the press!

Write for your copy now, or contact the fully qualified Dorr-Oliver representatives and distributors listed at right.

DORR-OLIVER INCORPORATED
WORLD-WIDE RESEARCH • ENGINEERING • EQUIPMENT
STAMFORD • CONNECTICUT • U.S.A.

▲ For more details circle NED-633 F9 on enclosed inquiry slip ▲

POWRARM IN . . . PRODUCTION UP! UP! UP!

FRIDEN CALCULATING MACHINE COMPANY INCREASES WORKER EFFICIENCY WITH PowRarm!

By using Wilton PowRarm Work Positioners as the basic unit of adjustable assembly boards, Friden Calculating Machine Co. increased production through a savings of operator time, motion, and assembly space. PowRarms allow 360 degree rotation of the new boards, and workers can incline them at various angles. May be mounted on benches, conveyors, or floor stands as illustrated. Many firms use PowRarm for inspection, servicing, soldering, assembly, and any work positioning operation. Ask your Wilton distributor for a demonstration.

Order Now From Your Stocking Industrial Distributor

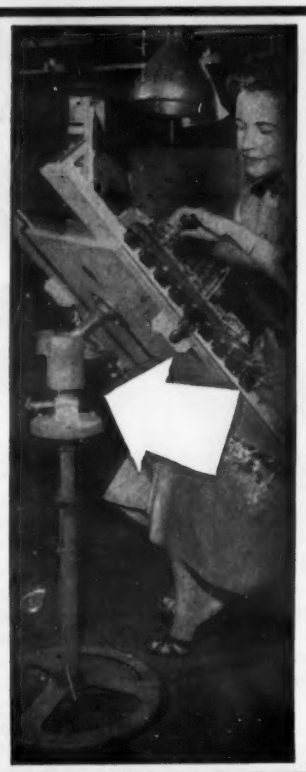
Write for free 52 page catalog!

WILTON

TOOL MFG. CO., INC.
Schiller Park, Ill.

Sold by leading distributors the world over!

NED-69



▲ For more details circle NED-641 F9 on enclosed inquiry slip ▲

"Sounds for Safety"

save life & property with Falcon®

No one can place a price on the possible loss of lives due to fire.

But Falcon Automatic Fire Detectors & Systems can give early warning of fire to protect lives and guard property.

Falcon Automatic Fire Detectors & Systems are:

- U/L APPROVED
- SELF-CONTAINED (no wires or batteries)
- FULLY GUARANTEED

... and they are low in cost!

WRITE for particulars — and free, informative "Sounds for Safety" folder! DEPT ND

Falcon® ALARM CO., INC.
SUMMIT, NEW JERSEY

▲ For more details circle NED-642 F9 on enclosed inquiry slip ▲

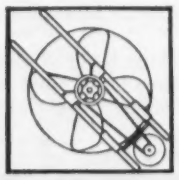
OSCILLATORS
AIR CIRCULATORS
EXHAUST

FANS

BY EMERSON-ELECTRIC

low initial cost
low operating cost

You save money when you install quiet, efficient fans — oscillators, air circulators and both belt-drive and direct-drive exhaust fans—backed by the Emerson-Electric famous factory-to-user guarantee.

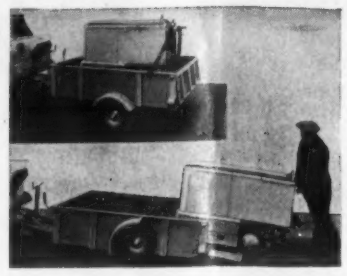


WRITE FOR FREE CATALOG NO. F279

EMERSON ELECTRIC of St. Louis • Since 1890
8100 FLORISSANT AVE. • ST. LOUIS 21, MO.

▲ For more details circle NED-643 F9 on enclosed inquiry slip ▲

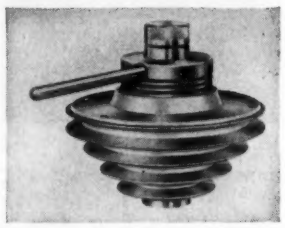
ELEVATING TRAILER raises and lowers hydraulically



Hydraulic - mechanical system raises or lowers the 1000-lb capacity, 48 x 72 in. steel bed of the Trailevator trailer to ground level in a few seconds. The body locks securely in a raised position for a shock absorbing, independent spring suspension ride. Construction features include welded tubular steel frame, reinforced box body, formed steel flooring, and reinforced tailgate which also serves as a loading ramp. Sides are 15 in. high, and over-all road clearance is 14 in. Standard accessories are dual combination tail lights and direction signals, reflectors, license light, third wheel with hand jack, tie-down loops, and end panels. Optional split hitch permits lowering front end of trailer without detaching from the towing vehicle. Made by **Magline Inc.**, Trailevator Div., 1900 Mercer St., Pinconning, Mich.

▲ For more details circle NED-644 F9 on enclosed inquiry slip ▲

SPEED REDUCER provides precise torque control



Torque-Master ball transmission type speed reducer can be installed on any motor to make it a speed reduction unit. Contained within a four-step V-type pulley, it may be operated as a 3:1 speed reduction unit, or locked in direct drive for delivery of the full motor output. Device not only multiplies torque, but provides precise torque control through a direct-reading dial. Drive eliminates distortion and breakage of fragile parts during drilling and reaming, and is suited for punch press and other intermittent power applications, since the torque control feature automatically cushions starting loads. Reducer is offered in 5-in. diameter size for ½ to ⅝-in. shafts, and in a 6-in. size for ½ to ¾-in. shafts. Made by **Roberts Aircraft Engine Co.**, 203 N. Lake St., Burbank, Calif.

▲ For more details circle NED-645 F9 on enclosed inquiry slip ▲

Infrared Heat Treating Furnaces

A. F. Holden Co.—Rapid starting, rapid cooling, and rapid restarting are features of luminous wall combustion system for gas-fired, infrared heat treating furnaces. A 48-page illustrated Bulletin "Instantaneous Heat" includes numerous drawings and prints of available equipment and designs. Existing equipment can be converted to luminous wall infrared heat which has a 400 to 2300° F range.

▲ For more details circle NED-646 F9 on enclosed inquiry slip ▲

Not only TEFLON®

but MOLDED

Combine optimum chemical inertness of Fluoroflex®-T, a special compound of Teflon, with unique strength and flex life achieved by molding and you have the big difference in bellows. Molding gives undamaged grain structure . . . uniform convolutions that don't fatigue and crack.

Unequalled flex life — 20 to 30 times that of ordinary bellows machined from Teflon.

Work over wider pressure range — maintain full working pressures even after flexing.

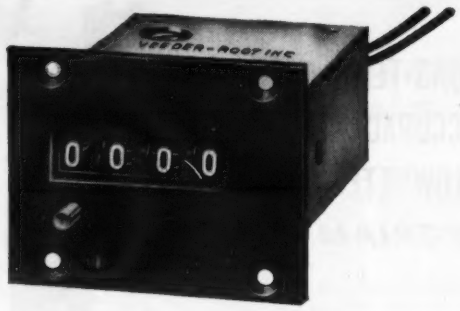
Corrosion-proof — chemically inert, universally useful.

Range of styles and sizes: Available with special configurations and couplings. Send for data. Write Department 260 RESISTOFLEX CORPORATION, Roseland, New Jersey.

®Fluoroflex is a Resistoflex trademark, reg., U.S. pat. off.
®Teflon is DuPont's trademark for TFE Fluorocarbon resins.

RESISTOFLEX

▲ For more details circle NED-647 F9 on enclosed inquiry slip ▲



ALL-NEW PANEL-MOUNTED HIGH SPEED ELECTRICAL COUNTER

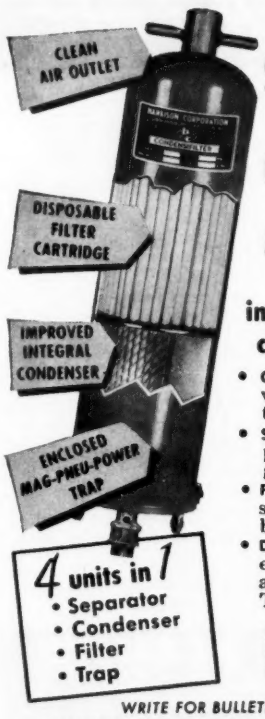
Here's a quick review of the most newsworthy features of this all-new counter:

- Instant electric resetting.
- Push-button reset, either mechanically on the machine, or electrically from a distance.
- One button resets an entire panel.
- Panels can go right in your office.
- Counter is small, but figures are large.
- Speeds rated to 3,000 counts per minute.

EVERYONE CAN COUNT ON Veeder-Root INCORPORATED HARTFORD 2, CONNECTICUT

▲ For more details circle NED-648 F9 on enclosed inquiry slip ▲

HANKISON CONDENSIFILTERS



REDUCE maintenance MAINTAIN accuracy

in pneumatic instruments, controls, and machinery

- CONDENSE oil and moisture vapors—for maximum protection of pneumatic systems
- SEPARATE entrained liquids—preventing corrosion and sluggish equipment
- FILTER contaminant solids—scale, rust, dirt, with disposable cartridge
- DISCHARGE all condensates and entrainments with built-in, automatic Mag-Pneu-Power Trap

Capacities: M-100T, 100 scfm at 100 psig; M-30T, 30 scfm at 100 psig. Both models of rugged construction, require only 1 hour per year servicing.

WRITE FOR BULLETIN 4158

HANKISON CORPORATION
College & Pike Canonsburg, Penna.

▲ For more details circle NED-649 F9 on enclosed inquiry slip ▲

TIME YOUR TESTS IN SPLIT-SECONDS

GRA LAB

ALL PURPOSE INDUSTRIAL TIMERS

MODELS AT $23.95 TO $29.95

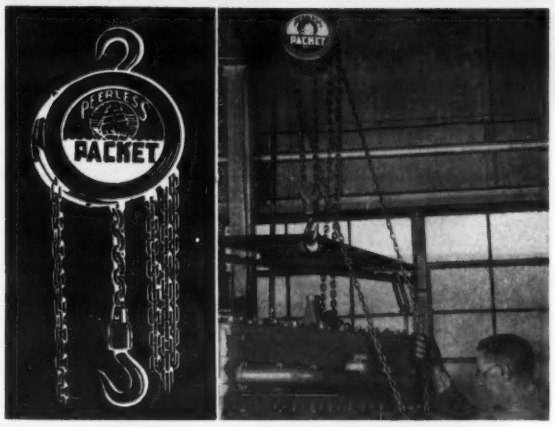
You can set the large 8" dial for any desired time period within an unusually wide range of 3600 possible settings, (i.e., 1 sec. to 60 min., 1 min. to 60 hrs., etc.). At end of preset interval alarm sounds and external load is automatically switched on or off.

Gra-Lab Micro Timers, **Electric Stop Clocks**, are available in 1/10 sec. or 1/1000 min. graduations for split-second measurements of elapsed time in laboratory or production operations, Price $37.50

WRITE FOR COMPLETE CATALOG!

DIMCO-GRAY COMPANY 203 E. Sixth St. DAYTON 2, OHIO

▲ For more details circle NED-650 F9 on enclosed inquiry slip ▲



Easy Pull is a laborsaving feature of Peerless Packet Hand Chain Hoists

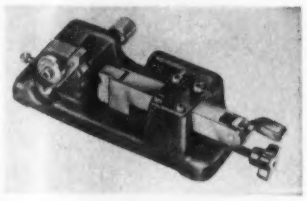
Prelubricated ball bearings, simplified gearing, and easy-to-grip hand chain links take the strain out of lifting with a Peerless Packet Hand Chain Hoist. A pull of only 42 lb. lifts the maximum load with the ½-ton model, 56 lb. with the 1-ton model, and 60 lb. with the 2 ton. Drop forged heat-treated steel hooks and heat-treated steel chain, strong and flexible, hold the load. Of enclosed design, it withstands rough handling, keeps out dirt, reduces maintenance. For complete information, send for Bulletin P-5.

THE HARRINGTON COMPANY
Plymouth Meeting 16, Pa.

Hand Chain Hoists (¼ to 60 tons) • Electric Hoists (170 to 4000 lb.) • Trolley Hoists (¼ to 12 tons) • Lever Pullers (¼ to 1½ tons) • I-Beam Trolleys (¼ to 20 tons)

▲ For more details circle NED-651 F9 on enclosed inquiry slip ▲

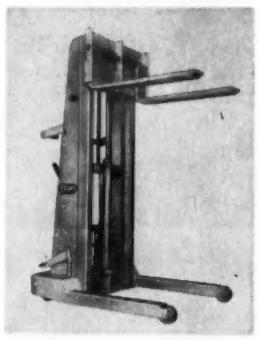
ADJUSTABLE DRILL FIXTURE exactly locates safety wire holes



Fingertip pressure on the cam lock of the Dandee safety wire drill fixture instantly clamps and releases parts to be drilled. The exact location of the hole in the corners of the hex or in round bodies is adjustable. The quickly set-up Model SW-15 fixture weighs 5 lb and uses standard Ace drill bushings. It has black oxide or Electro-film surfaces. Made by **Ace Drill Bushing Co.**, 5407 Fountain Ave., Los Angeles 29, Calif.

▲ For more details circle NED-653 F9 on enclosed inquiry slip ▲

FORK LIFT manual unit lifts 1000 lb



Compact design enables the Model HS manually operated fork lift to operate in narrow aisles and congested areas. Lifting forks lower to the floor and are adjustable from ⅜ in. inside to 26 in. outside. Capacity is 1000 lb and lifting heights are 54, 64, 74, and 84 in. Dual foot-operated floor locks, dual lifting chains, swiveling rear casters, and heavy duty wheels and casters with roller bearings are built into the straddle type unit. Made by **Crown Controls Co.**, 40-44 S. Washington St., New Bremen, Ohio.

▲ For more details circle NED-654 F9 on enclosed inquiry slip ▲

POWER SUPPLY & CONTROL for magnetic clutch or brake units

Improved power supply control for Cycledyne electromagnetic clutch-brake drives and Cycle-sheave clutch-sheave combinations is primary function of the Cyclematic control. It can also be used to supply and control other makes of low current clutch and/or brake units. Control, in a chassis mount or enclosed panel assembly, converts incoming 115/230/460/575 v ac into 0 to 100 v dc. It incorporates potentiometer selection of acceleration and deceleration rates, as well as torque limitation protection. Plug-in control may be used with virtually any type of manual or automatic switching for start-stop cycles, positioning, jogging, etc. Made by **Cycledynamics Inc.**, 19025 W. Davison Ave., Detroit 23, Mich.

▲ For more details circle NED-655 F9 on enclosed inquiry slip ▲

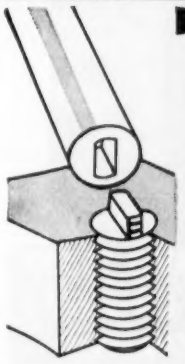
How to select WORM GEAR Drives FREE TO DESIGN ENGINEERS

NEW Bulletin 218

Complete up-to-date information on Cone-Drive double-enveloping worm gear drives. Provides all specification data plus "how to select and order".

CONE-DRIVE GEARS
DIVISION MICHIGAN TOOL COMPANY
7171 E. McNichols Rd. • Detroit 12, Michigan

▲ For more details circle NED-657 F9 on enclosed inquiry slip ▲



GREATER HOLDING POWER at LESS COST with Setko SLABBED HEAD SET SCREWS!

NU-CUP POINTS add even greater holding power!

- *Takes 50% more torque* than comparable hexagon socket set screws
- *Costs Less* than hexagon socket set screws of same metals
- *Holds Better*, tighter, won't slip
- *Fully Threaded*, can be flush mounted
- *Standard Points* available
- *Self Locking* with Zip-Grip® thread, or Crest-Lok, if needed

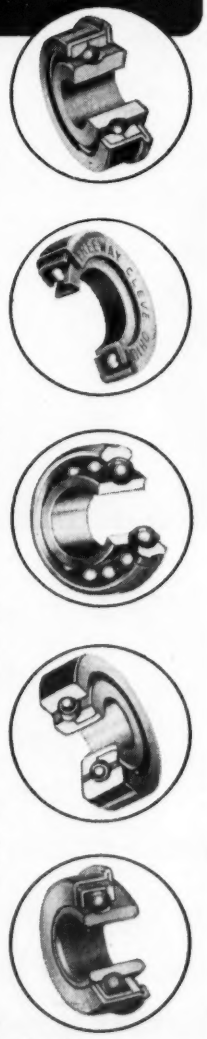
"OPERATION RE-ANALYZE FOR COST REDUCTION"—A new Free Setko service designed to help you *cut costs—speed up production—increase quality*...Setko Engineers have helped many Companies save thousands of dollars through planned re-analysis of their socket, slotted and slabbed head set screws as well as socket cap screw needs. *Write* today for full information. Ask about "Operation Re-analyze."

156RR **Set Screw & Mfg. Co.** 130 Main Street, Bartlett, Illinois

▲ For more details circle NED-658 F9 on enclosed inquiry slip ▲

Cut your BEARING COSTS to just PENNIES

WITH THESE **5 FREEWAY UNITS**

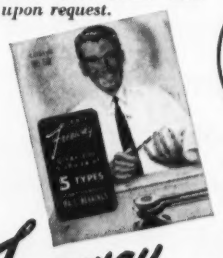


You get positive anti-friction protection for less than you ever thought possible, when you use Freeway semi-precision bearings. Because every Freeway bearing combines field-proven design with quality construction, to give you peak performance over a wide range of operating conditions.

Another important factor—Freeway offers you a selection of five separate and distinct types of bearings. Each type incorporates definite application and installation advantages, to provide a "tailor made" unit that will meet your exact requirements easily, efficiently and economically.

Our catalog 59, covering thousands of bearing combinations, will interest you. Write today.

Freeway washers and stampings also reflect the highest manufacturing standards . . . at the lowest possible price. Full information about these items also available upon request.



Send for CATALOG 59

Complete data on all five bearing types. Get your copy now.

Freeway WASHER & STAMPING COMPANY
P. O. Box 1756, Cleveland 5, Ohio

▲ For more details circle NED-652 F9 on enclosed inquiry slip ▲

There's a right time for down-time!

Plan your maintenance with Hobbs INDUSTRIAL HOUR METERS

- Get information needed for on-time performance of planned maintenance.
- Obtain data on machine use to determine scheduling or purchase of capital equipment — precision machine tools, etc.
- Set up a sound basis for rental and leased equipment.
- A true timing instrument — not a revolution counter. Indicates operating time in hours and minutes.

Distributors in Principal Cities. WRITE FOR CATALOG 600

Symbol of SW Excellence — **John W. Hobbs Corporation**
A Division of STEWART-WARNER CORPORATION
2055 YALE BLVD., SPRINGFIELD, ILLINOIS

▲ For more details circle NED-656 F9 on enclosed inquiry slip ▲

The S-22 MICROFINISH COMPARATOR

GAGE SURFACE FINISH TO NEW A.S.A. STANDARDS - *Quickly - Accurately*

This convenient pocket comparator has 22 precision surfaces for specifying and controlling finish to the new A.S.A. Standard B46.1 - 1955. Electroformed in durable corrosion-resistant nickel, the S-22 Comparator provides every department with the most inexpensive method for uniform, accurate control of finish characteristics.

Save valuable time in engineering, inspection, quality control—eliminate costly overfinishing in purchasing and production. $17.50 complete with leather case.

Available from leading industrial distributors, or write

FAIRFIELD DEVELOPMENT LAB., INC.
(SUCCESSOR TO BAPTIST MACHINE CO.)
40 Ludlow Street, Stamford, Conn.

▲ For more details circle NED-659 F9 on enclosed inquiry slip ▲

New, Lightweight, Powerful FLEXIBLE TOOL SHAFT Connects To Any Motor

Stow flexible tool shafts increase precision, eliminate operator fatigue on production grinding, polishing, sanding and other finishing operations in which the operator must hold the tool for long periods of time. Up to 3 HP can be transmitted through these new tool shafts, which consist of a core made of highest grade music wire rotating inside a rubber-covered casing. Each shaft furnished with ball bearing motor connection and high-speed ball bearing handpiece with removable wheel Arbor having ½-20" threads. An angle head can be used in place of the handpiece as shown in the photograph.

Four Sizes of these shafts are available . . . models 38, 40, 50 and 63, which come in 6-foot standard lengths. The largest shaft, model 63, will handle 3 HP at speeds up to 6900 RPM and has a maximum capacity for various accessories as follows: grinding wheel, 8" x 1"; buffing wheel, 8" x 1"; sanding disc, 9" diameter; sanding drum, 6" x 2½"; wire brush, 8" x 2"; steel drills, ½" diameter.

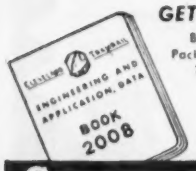
Write for Catalog 59

STOW MANUFACTURING CO.

26 Shear St. Binghamton, New York

▲ For more details circle **NED-660 F9** on enclosed inquiry slip ▲

Installation of a 5-ton Cleveland Tramrail crane enabled a company to save on a bundling charge made for smaller bundles of rods, bars and angles it uses. This savings is $2.00 per ton. As 200 tons are used monthly, this amounts to $400 per month. Another saving of 2 man-hours per car is also made because of faster, more efficient unloading.



GET THIS BOOK!
BOOK No. 2008
Packed with valuable information...

CLEVELAND TRAMRAIL DIVISION
THE CLEVELAND CRANE & ENGINEERING CO.
6651 East 285th St., Wickliffe, Ohio

CLEVELAND TRAMRAIL

▲ For more details circle **NED-661 F9** on enclosed inquiry slip ▲

64 SIZES KRAFT CARTONS READY For SHIPPING

ESTABLISHED 1893
Campbell

QUALITY PACKAGING SINCE 1893
CAMPBELL BOX & TAG CO.
DIVISION OF STONE CONTAINER CORPORATION
MAIN & NEW STREETS SOUTH BEND 23, INDIANA

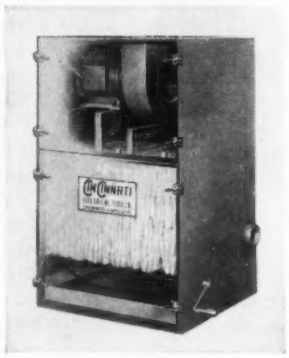
▲ For more details circle **NED-662 F9** on enclosed inquiry slip ▲

PRESSURE CONTROL for air, gas, or liquid service

This versatile, waterproof Type J6, Model 200 pressure-vacuum control is intended for air, gas, or liquid applications requiring close on-off differentials. Adjustable ranges are from 30 in. Hg vacuum to 300 psi. Pressure settings are made on the uncalibrated control by removing cover and adjusting the hexhead screw. Normally open, normally closed, or double throw (no neutral) switches are available and are rated for 15 and 20 amp at 115/230 v ac. All switches are single pole and suitable for ambients to 180° F. The 1½-lb unit has cast aluminum enclosure and brass bellows housing. Made by **United Electric Controls Co.**, 79 School St., Watertown 72, Mass.

▲ For more details circle **NED-663 F9** on enclosed inquiry slip ▲

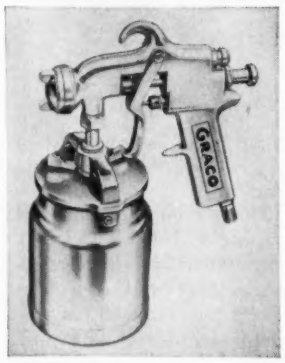
DUST COLLECTOR serves two 30 in. grinding wheels



Added to line of dust collecting equipment is this large Type Air-4 bag-type unit which can serve two 30-in. grinding wheels or two 18-in. buffing wheels. It is powered by dripproof, 3-hp motor and has 4-in. inlets with 6000 fpm velocity at each inlet. Unit is particularly suited for recovery of gold, platinum, or silver dusts. Made by **Cincinnati Electrical Tool Co.**, 364 Mt. Hope Ave., Cincinnati 4, Ohio.

▲ For more details circle **NED-664 F9** on enclosed inquiry slip ▲

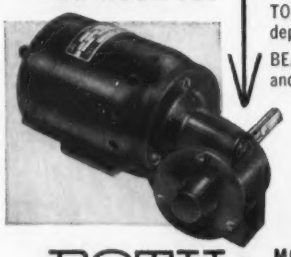
LIGHTWEIGHT SPRAY GUN cup type for various finishes



Paints, enamels, lacquers, and other finishes can be sprayed by the balanced Graco cup type spray gun. The lightweight unit has a two-piece aluminum alloy body with a built-in air distributor for even air distribution and spray pattern. Gasketless gun is leakproof and easy to clean. All fluid tips and male threads are stainless steel. The one-piece drawn aluminum paint cup has a fast-acting spider lock. Made by **Gray Co.**, 1032 Sibley St. N.E., Minneapolis 13, Minn.

▲ For more details circle **NED-665 F9** on enclosed inquiry slip ▲

this Howard fractional H.P. gear motor can be used for



BOTH universal and induction applications

RATIOS FROM 10:1 to 60:1

MODEL 2900: 2 Pole—4 Pole Induction with A26 Gear Unit
DIAMETER: 3⅝"
LENGTH: 7¾" to 8¹¹⁄₆₄"
HORSE POWER: 1/70 to 1/15 depending on length of stacking.
TORQUE OUTPUT: Up to 60 in. lbs. depending on ratio.
BEARINGS: Permanently lubricated and sealed ball bearings.

Check your specifications with Howard. Write for complete details and prices on these and other Howard gear motors and reduction units.

MODEL 29-500: Universal AC/DC or Shunt with A26 Gear Unit
DIAMETER: 3⅝"
LENGTH: 7¹³⁄₆₄" to 7²³⁄₆₄"
HORSE POWER: 1/70 to ¼ depending on length of stacking.
TORQUE OUTPUT: Up to 60 in. lbs. depending on ratio.
BEARINGS: Permanently lubricated and sealed ball bearings.

POWERED BY HOWARD

HOWARD INDUSTRIES, INC.
1740 State St., Racine, Wisconsin

Divisions: Electric Motor Corp., Cyclohm Motor Corp., Racine Electric Prods., Loyd Scruggs Co.

▲ For more details circle **NED-666 F9** on enclosed inquiry slip ▲

MARSHALLTOWN

ROTARY THROATLESS SHEARS

CAPACITIES
18 GAUGE TO ½"
CUTS ANY SIZE... ANY SHAPE

America's finest for every cutting job—straight, irregular or circular patterns.

Speedy—up to 6 ft. per minute. Efficient, easy to operate.

Built for extra heavy duty use. High grade tool steel cutters.

Write Today for Details and Prices

MARSHALLTOWN MFG. COMPANY
MARSHALLTOWN 2, IOWA

▲ For more details circle **NED-667 F9** on enclosed inquiry slip ▲

Quality KNIVES

Hyde engineered knives and tools are designed to last longer, perform better for lower production costs. Specialists in cutting needs for rubber, paper, plastic, foil, fabrics and food.

Since 1875

HYDE MANUFACTURING CO.
SOUTHBRIDGE, MASS.

HYDE

▲ For more details circle **NED-668 F9** on enclosed inquiry slip ▲

THE BUCKEYE Router

an entirely new kind of metal-cutting tool!

for precision cutting of the most intricate contours in metals, plastics, wood and honeycomb materials

WRITE FOR CATALOG
Lists all Buckeye air tools—drilling, fastening, abrasive, specials

Buckeye Tools CORPORATION

5017 SPRINGBORO PIKE • DAYTON 1, OHIO

▲ For more details circle **NED-669 F9** on enclosed inquiry slip ▲

SAVE STORAGE SPACE

SAVE HANDLING TIME

Brown Sectional Stock Racks store more stock in less space. Handling is reduced to a short lateral movement instead of a long laborious end-haul.

Brown Racks are unique in both flexibility and economy. Spaced as required they can be easily relocated . . . they are neither cross-braced nor floor-bolted. Accessories, including base brackets and trays, increase usefulness.

Brown Racks are quickly installed, all components are slip-fitted together. No bolting, no tools.

WRITE TODAY for complete information on how low-cost Brown Stock Racks can help solve your storage problems. Brown Engineering Company, 129 No. 3rd Street, Reading, Pennsylvania.

BROWN *Flexible* **STOCK RACKS**

▲ For more details circle NED-670 F9 on enclosed inquiry slip ▲

a CIRCO steam cleaner

your most valuable plant maintenance tool!

A single CIRCO unit steam cleans:

MACHINERY • PARTS • UNIT HEATERS • TOOLS • MOTORS • ENGINES • SHOP FLOORS • BUILDING INTERIORS • EXTERIORS

Use it for hundreds of industrial plant maintenance applications . . . with or without detergents for cleaning and rinsing.

AS LOW AS $495.00

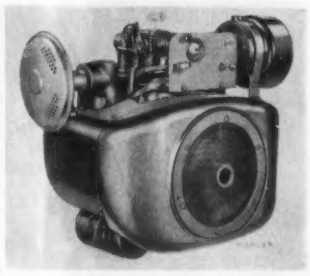
Write for detailed bulletin!

SINCE 1923 CIRCO

CIRCO EQUIPMENT COMPANY
51 Terminal Avenue
Clark (Rahway), New Jersey
Telephone: FUlton 8-8600

▲ For more details circle NED-671 F9 on enclosed inquiry slip ▲

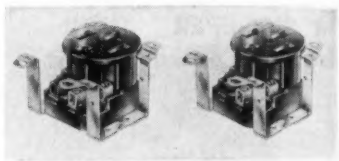
TWO-CYLINDER ENGINE
low-silhouette unit rated 24 hp



Muffler and oil-bath air cleaner have been lowered to reduce overall size of the redesigned Model K662 four-cycle, two-cylinder, air-cooled, gasoline engine. Unit has low silhouette for cramped or hard-to-get-at installation on concrete mixers, elevators, oil well pumps, and portable mixing plants. It has an external, high tension magneto and tapered roller bearings on both ends of crankshaft. The 230-lb engine develops 15 hp at 1800 rpm and 24 hp at 3200 rpm. Made by Kohler Co., Kohler, Wis.

▲ For more details circle NED-673 F9 on enclosed inquiry slip ▲

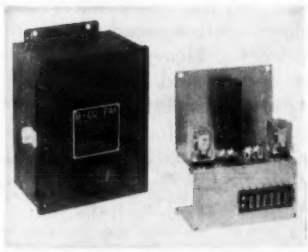
HEAVY-DUTY RECEPTACLES
30 and 50 amp, 250 v grounding type



Of tough Bakelite construction, these 30 and 50-amp, 250-v grounding receptacles are suitable for use with portable electric tools, welding and maintenance equipment, heavy business machines, and other equipment. Both units fit galvanized boxes 4 11/16 in. square and not less than 2⅛ in. deep, and are available with four-wire rubber cord sets in 3, 4, and 6-ft lengths. Made by Arrow-Hart & Hegeman Electric Co., 103 Hawthorn St., Hartford 6, Conn.

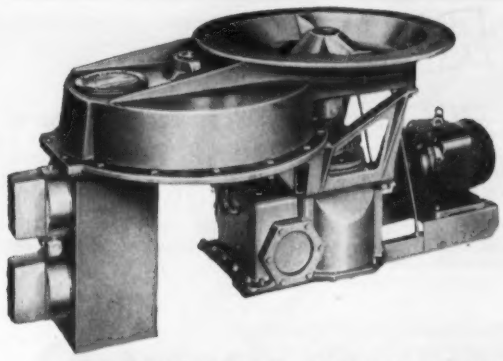
▲ For more details circle NED-674 F9 on enclosed inquiry slip ▲

GAS SHUT-OFF DELAY
offsets momentary voltage drop



Closing of gas valves during momentary periods of voltage drop is prevented by the M-CO-Pak delay unit. It keeps the fuel shut-off valves open for a 5-sec period in the event of power fluctuation or failure. Three basic models are offered: Model A operates on 110, 220, or 440 v, 60 cycles, and is suited for most industrial gas furnaces; Model B has an additional interlock for use with other types of safety devices; Model C for use with flame safety controls permits a greater variety of combinations for maintaining external circuits. The 5-sec delay is factory-set, but longer delay periods can be furnished on all models. Made by Michigan Controls Co., 8790 Grinnell Ave., Detroit 12, Mich.

▲ For more details circle NED-675 F9 on enclosed inquiry slip ▲



ROTARY BIN CHECK VALVE
assures constant flow of finely divided materials

Installs on bottom of hoppers and bins, eliminates arching and flooding. Ideal for regulating flow to vibrating feeders; in special cases, bin valve may be equipped with variable speed drive for use as volumetric feeder. Three types, with maximum capacity per hour of 150, 500, and 1000 cubic feet. Motor controls to suit any desired operation. Sales offices and distributors in major cities.

WRITE FOR BULLETIN 841

THE JEFFREY MANUFACTURING COMPANY
952 North Fourth Street • Columbus 16, Ohio

JEFFREY

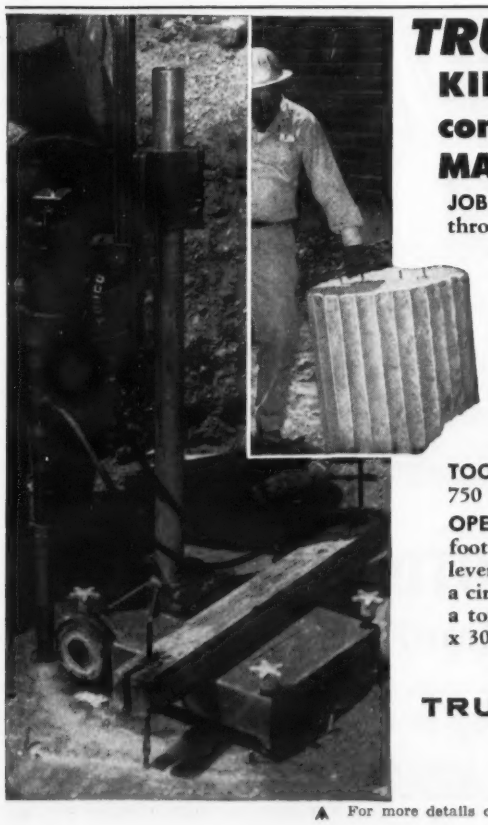
▲ For more details circle NED-676 F9 on enclosed inquiry slip ▲

LOOK FOR THIS SIGN

CAPEWELL

for fast, dependable service on

- hand hack saws
- power hack saws
- band saws
- hole saws
- hammers
- ground flat stock



TRUCO® DOES IT AGAIN!!!
KING SIZE HOLES in 30" reinforced concrete footing drilled with TRUCO MACHINE and TRUCO DIAMOND BITS

JOB: Cut 87 holes 3" diameter around three 30" diameter circles through 30" reinforced concrete footing of a 50' retaining wall; holes to be cut without impact or vibration which might shatter concrete, break bond of concrete to 1¼" steel rods, or cause spalling which would expose reinforcement. Purpose of the holes was to permit pouring of three 24" diameter by 46' friction piles to support a reinforced concrete plate upon which would be erected a 70' concrete and ceramic pylon weighing 200 tons.

PROJECT: Fort Moore Pioneer Memorial, Los Angeles.

CONTRACTOR: John L. Meek Construction Co. Inc., L. A.

TOOLS: Truco Model B Portable Diamond Drilling Machine, 750 rpm motor, 3" O.D. Truco Diamond Drill Bits.

OPERATION: Truco machine was set up and anchored to bolts in footing so it could be rotated in a circle. Anchoring provided leverage for fast cutting. Drilling 29 overlapping holes around a circle provided a 30" diameter hole with a 27" core weighing over a ton. Bits pierced concrete and steel without difficulty. Each 30" x 30" hole was completed in 29 hours. Nine Truco bits were used.

Write or phone for nearest distributor's name.

TRUCO MASONRY DRILLING DIVISION
WHEEL TRUEING TOOL COMPANY
87-3200 W. Davison Ave. • Detroit 38, Michigan

▲ For more details circle NED-672 F9 on enclosed inquiry slip ▲

LOOK FOR THIS SIGN

INDUSTRIAL DISTRIBUTORS — SERVING INDUSTRY ECONOMICALLY — THE RIGHT HAND OF PRODUCTION

for fast, dependable service on all your industrial needs.

Patronize the Distributor who displays both.

CAPEWELL

THE CAPEWELL MFG. CO.
HARTFORD 2, CONN.

▲ For more details circle NED-677 F9 on enclosed inquiry slip ▲

READ any surface temperature with Alnor® PYROCON

Equipment...material...metallic or non-metallic...flat, curved... revolving or stationary—you can read every surface temperature accurately in less than 3 seconds!

Compact, complete in precision design, this rugged instrument assures highest standards of speed, accuracy and dependability.

Alnor Portable Pyrocons come in scale ranges to 2000° F., with thermocouples for every application. You'll find full details on the Pyrocon exactly suited to your operations in Bulletin 4257. Send for your copy now. Write: Illinois Testing Laboratories, Inc., Room 529, 420 N. LaSalle St., Chicago 10, Ill.

Alnor PRECISION INSTRUMENTS FOR EVERY INDUSTRY

▲ For more details circle NED-678 F9 on enclosed inquiry slip ▲

AIR POWER at LOW COST

Honed cylinders, lightweight automotive-type pistons, a precision-balanced crankshaft — features like these make Quincy Compressors the choice for efficient, low-cost operation. Safe-Q-Lube system protects bearings, provides smooth loadless starts and stops for longer compressor life, too. Models for every industrial need to 90 C.F.M.

Quincy COMPRESSORS

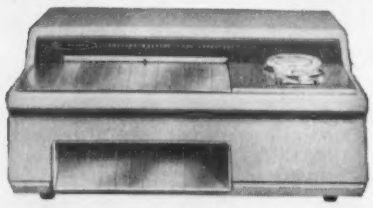
SEND FOR CATALOG

QUINCY COMPRESSOR CO., Dept. NED-659 QUINCY, ILLINOIS

Air Compressors Exclusively

▲ For more details circle NED-679 F9 on enclosed inquiry slip ▲

Accurate copies in 4 seconds!



Only "Thermo-Fax" Copying Machines do so many jobs!

SPEED work flow throughout the office or plant. **MAKE** copies by the only completely electric, completely dry, completely clean copying process. **USE** also as low-cost billing, addressing, accounting and labeling machines.

Call your local dealer or mail the coupon

MINNESOTA MINING AND MANUFACTURING COMPANY ...WHERE RESEARCH IS THE KEY TO TOMORROW

Minnesota Mining and Manufacturing Company, Dept. KP-69 St. Paul 6, Minn.

Name_____

Address_____

City_____ Zone____ State_____

Thermo-fax 3M THE TERM "THERMO-FAX" IS A REGISTERED TRADEMARK OF MINNESOTA MINING AND MANUFACTURING COMPANY

▲ For more details circle NED-680 F9 on enclosed inquiry slip ▲

POWER STEERING PACKAGE for gasoline industrial trucks

Power unit and adapter, flow divider, and necessary flexible hose and fittings comprise this power steering package which can be quickly installed on gasoline powered industrial trucks with ordinary hand tools. Only a small section of truck steering shaft and tube need be removed to accommodate the 3-in. diameter power unit. Separate flow divider regulates hydraulic flow to assure full-time power steering as well as full power for other hydraulic accessories. Wheel does not react to severe bumps, and there is no wheel kick-back when truck stalls. A range of steering kits is offered to fit most makes and models of trucks. Made by **Ready-Power Co.**, 3826 Grand River Ave., Detroit 8, Mich.

▲ For more details circle NED-681 F9 on enclosed inquiry slip ▲

MOBILE VACUUM SWEEPER heavy duty battery powered unit

A 24-v, 365 amp-hr battery enables the Model 80-E heavy duty vacuum sweeper to operate 8 hr on a single battery charge. It travels at up to 4.5 mph in maintaining factories, laboratories, and other types of large buildings. Maximum cleaning path is 53 in. with the side brush for flush-with-wall sweeping. Use of two 1-hp dc motors (one for propelling and one for sweeping) enables the machine to travel slowly in congested area with no loss of sweeping efficiency. Heavy dirt is tossed forward into a 12-cu ft hopper and a suction fan forces dust through a 4200-sq in fabric dust filter. Sweeper has foot pedal controls for forward, reverse and brake, automotive steering, three forward speeds, and 65-in. turning radius. Made by **G. H. Tennant Co.**, 721 N. Lilac Dr., Minneapolis 22, Minn.

▲ For more details circle NED-682 F9 on enclosed inquiry slip ▲

Plastic Sheets & Blocks

Cadillac Plastic & Chemical Co.—Prices, quantity discounts, grades, colors, patterns, and thickness tolerances of Plexiglas cast acrylic sheets and Cadco extruded acrylic sheets and blocks are found in the 16 pages of this catalog dated Feb. 1, 1959. Grade G, II, IA, and UVA masked and unmasked Plexiglas sheets, plus patterned and corrugated sheets, are covered.

▲ For more details circle NED-683 F9 on enclosed inquiry slip ▲

FOOTE BROS.

Better Power Transmission Through Better Gears

VARI-MOUNT VARIABLE SPEED DRIVES

- 1 to 15 HP
- Variable Adjustment Ranges from 2:1 to 6:1
- Output RPM from 712 to 2.5, depending on ratio and speed range selected

Vari-Mount Drives, available in horizontal or foot mounted, vertical or flange mounted, and extended shaft flange mounted types, offer infinitely variable speed selection, great flexibility of operation, easy maintenance.

Use your own motor — old or new NEMA Standard, or specify your choice when ordering. Positive handwheel control. Remote or automatic controls available. Spring loaded, self-centering variable pulley and close coupled, in-line design insure permanent belt alignment, smooth performance. Quick belt changes, easily accessible lube fittings mean low maintenance costs.

Catalog JB has complete details and selection data. Write for your copy.

FOOTE BROS. GEAR AND MACHINE CORPORATION

4569 South Western Boulevard • Chicago 9, Illinois

▲ For more details circle NED-684 F9 on enclosed inquiry slip ▲

RUST CUTTER®

Now—Whiting RUST CUTTER in aerosol form for tough-to-reach spots!

Frozen joints . . . rust-bonded connections . . . corroded couplings — *no matter how inaccessible* — will break loose after a shot of Whiting Rust Cutter. Now available in a new 16-ounce Jet-Spray can that makes it possible to hit a three-inch "target" from three feet away. Special additives give Rust Cutter excellent "wetting-out" properties . . . give Rust Cutter pinpoint spray a penetrating action to reach rusted threads wherever located.

Rust Cutter is ideal for use in any industry for any maintenance job where grease or rust loosening is a problem. Costs only $1.65 for long-lasting 16 oz. can. For more information, call your jobber or write Claronex Products, Inc., 239 Java Street, Brooklyn 22, N. Y.

DISTRIBUTORS—A NUMBER OF KEY TERRITORIES STILL AVAILABLE. WRITE OR WIRE FOR COMPLETE DETAILS.

ALSO—

Whiting Rust Cutter is also available in the familiar liquid form, comes in an economical, easily refillable pour-spout pint can.

▲ For more details circle NED-685 F9 on enclosed inquiry slip ▲

MICRO SWITCH Precision Switches

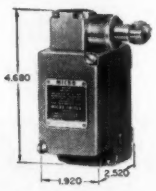
2 new switches in sealed "Plug-in Limit" line!

Two new "Plug-in Limit" switches with side roller plunger and side plunger actuators increase the usefulness of this pace-setting line. These switches are now available in 8 different types of actuators.

Rugged, reliable, compact, the switches are completely sealed against oil, water, dirt and dust. With their quick-change, plug-in feature they virtually eliminate downtime . . . give unmatched versatility of machine control.

"Plug-in Limit" switches are 2-circuit, double-throw and meet NEMA Industrial Control Standards.

Authorized distributors maintain stocks everywhere. Technical specialists are available at the MICRO SWITCH office near you. For complete details on "LS" switches send for Catalog 84.



New 203LS1 "Plug-in Limit" switch with side roller plunger actuator.

New 204LS1 "Plug-in Limit" switch with side plunger actuator.

MICRO SWITCH . . . FREEPORT, ILLINOIS

A division of Honeywell

In Canada: Honeywell Controls Limited, Toronto 17, Ontario

Honeywell

MICRO SWITCH Precision Switches

▲ For more details circle NED-686 F9 on enclosed inquiry slip ▲

CUT YOUR LABELING COSTS more than 30%

POTDEVIN Label Paster

Time savings of 30% and more with unskilled operators makes your POTDEVIN Label Paster quickly pay for itself. No adjustments required for varied shaped labels. Accurate control of adhesive minimizes waste and assures clean, neat labeling.

Available in 6", 8½", 12" and 18" widths.

ESTABLISHED IN 1893 POTDEVIN MACHINE CO.

273 North Street • Teterboro, N. J.

Designers and manufacturers of equipment for Bag Making, Printing, Coating, Laminating, Gluing and Labeling

▲ For more details circle NED-687 F9 on enclosed inquiry slip ▲

Polaroid Corporation, WALTHAM, MASS.
One of Many Prominent Users

Polaroid Corporation of Waltham, Mass. is one of many prominent companies which have found the new Hobbs 60" Slitter and Rewinder ideal for converting. Adaptations of the Hobbs Slitter can be made for converting delicate film, heavy, tough plastics, paper or other similar materials.

This machine is available in 40", 50" and 60" sizes as well as 72" and with single or double shaft windup. Controls for starting, stopping, tension adjustment and speed variations are within easy reach of the operator. Other features include shear type cutters, automatic web guide, static eliminator and blower type trim remover with receptacle.

EST 1883 *Write for Hobbs 60" Slitter circular.*
HOBBS MANUFACTURING CO.
41 F SALISBURY ST., WORCESTER 5, MASS.
Branch Offices and Representatives in Irvington, N. J. Chicago, Cleveland, Louisville, Greenville, S.C. and Toronto, Can.
WINDERS • SHEARS (Hand & Automatic) • DIE PRESSES • SLITTERS

For more details circle NED-688 F9 on enclosed inquiry slip

Drive out
FOUL AIR
Blow in
FRESH AIR
with Coppus Type A Ventilator

Assure greater safety, comfort for workers . . . get greater efficiency.

Drive out dangerous fumes, gases, stagnant or hot air from boilers, cable manholes, tanks, vats and other confined places. *Supply fresh air continuously.*

Send now for further information. Coppus Engineering Corporation, 406 Park Avenue, Worcester 2, Mass.

MANHOLES made safe for workers' entrance within minutes.

BOILER AND TANK INTERIORS cooled by Coppus. Fresh air supplied continuously.

ANOTHER
COPPUS
"BLUE RIBBON" PRODUCT

For more details circle NED-689 F9 on enclosed inquiry slip

Wherever enamel is used
JET-DRI
(Made with CCR-37)

USE equipment 15 minutes later!

WALK on floors 15 minutes later!

OPERATE trucks 15 minutes later!

DOES THE JOB *WITH NO DOWN-TIME!*

Greatest advance in paint history!
JET-DRI MULTI-PURPOSE INDUSTRIAL (NON-TOXIC) ENAMEL

Covers metal, concrete, wood, plaster . . . and dries in 15 minutes.

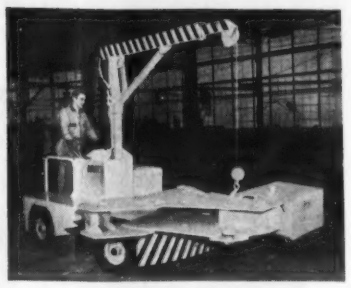
Wide range of colors and finishes. Also available in semi-gloss white and satin finish clear.

Free color card and descriptive literature

CONSOLIDATED CHEMICAL & PAINT MFG. CO., INC.
456 Driggs Ave., Brooklyn 11, N.Y.

For more details circle NED-690 F9 on enclosed inquiry slip

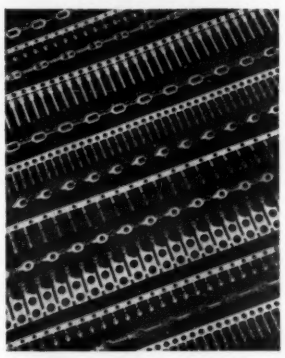
TRACTOR CRANE
is versatile, 2000-lb capacity unit



In-plant and yard handling of up to 2000-lb loads is facilitated with the Model 20RM2 Go-Devil tractor crane. Versatile Rotelift boom can be rotated 360 degrees, raised from horizontal to 75 degrees, extended 8 ft 6 in., and retracted. Actions are independent or simultaneous under fingertip hydraulic control. Cable speed is 50 fpm. Unit is 120 in. long and 54 in. wide. Boom is also available independently for truck or stationary mounting. Made by **Drott Mfg. Corp.**, Materials Handling Div., Wausau, Wis.

For more details circle NED-691 F9 on enclosed inquiry slip

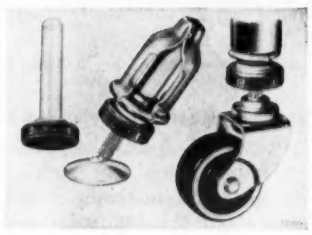
TERMINALS & CONNECTORS
miniature type in chain form



Miniature tubular terminals, receptacles, connectors, and Wrap-A-Wire terminals are offered in chain form for application by automatic insertion machines. Suited for volume production, they meet most requirements in printed circuits and other electrical and electronic applications. Savings in costs, time, and labor are realized by using them with inserting, staking, and crimping machines. Made by **Malco Mfg. Co.**, Dept. ND-5, 4025 W. Lake St., Chicago 24, Ill.

For more details circle NED-692 F9 on enclosed inquiry slip

ADAPTER SHANK
fits all grip ring caster sockets



Hollow adapter shank which fits all grip ring caster sockets receives 5/16 in.-18 spline threaded pintle of five adjustable floor glide sizes and one adjustable caster size. Threaded caster or glide stem is extended or retracted by rotating round adjusting nut at the adapter base. Photo shows adapter shank, a glide stem with a swivel base for slanting legs, and a caster with 1⅝-in. black phenolic plastic wheel. Made by **Adjustable Caster Co.**, 1411 Walnut St., Philadelphia 2, Pa.

For more details circle NED-693 F9 on enclosed inquiry slip

NEW HIGH TEMPERATURE
VACUUM FURNACE

- **4400°F in three minutes**
- **Refractory-free to sinter or heat treat high temperature metals or ceramics**

The new Model 2915 NRC Furnace is a completely packaged unit. Requires only connecting air, water and power.

Has large 6" I.D. x 10" heating element, automatic protective devices, and operates at 10^{-5} mm mercury or with inert gas. Easy to load and unload. Cleans completely in less than 30 min.

Write today for data on Model 2915 NRC Furnace and see how this unit can help make money.

NRC
EQUIPMENT CORPORATION

Dept. 29-F, 160 Charlemont Street, Newton 61, Massachusetts • Decatur 2-5800
A Subsidiary of National Research Corporation

For more details circle NED-694 F9 on enclosed inquiry slip

Surety saves you money
FOUR-2-ONE
VINYL IMPREGNATED WORK GLOVES

SLIP ON STYLE

PROVIDING
Longer Wear at Lowest Cost

As the name indicates, count on these Surety gloves outwearing cotton and many leather types **four or more to one** in most work. Users report great resistance to snagging and abrasion plus easy finger flexing and hand comfort. You can wash them, too; come up sparkling bright and lint free. Available in men's and women's sizes, two styles illustrated. Want samples? Check your Surety distributor or write today.

KNIT WRIST STYLE

THE SURETY RUBBER CO. Dept. N
CARROLLTON, OHIO
In Canada: Safety Supply Co., Toronto

For more details circle NED-695 F9 on enclosed inquiry slip

METER ACIDS, ALKALIES, SOLUTIONS, OILS, WATER

Whatever the liquid, you can meter and save!

The operator, in the photo above, is pre-setting the desired quantity on a Rockwell *stainless steel* meter prior to delivery to the reactor in a polyvinyl production process. The meter mechanism automatically shuts off when the pre-set quantity is reached. It's simple and quick to batch and blend liquids this way . . . and without contamination, fumes or hazards.

Wherever liquids are stored, mixed or consumed you'll be ahead to measure with Rockwell industrial meters. There's a size, type and metal for practically every liquid. Write for Bulletins.

ROCKWELL MANUFACTURING COMPANY, PITTSBURGH 8, PA

For more details circle NED-696 F9 on enclosed inquiry slip

STANDARD BROACHES from STOCK

***Minute Man* KEYWAY BROACH KIT**

In one minute and for as little as one cent you can cut a keyway with the Minute Man Keyway Broach Kit. For keyways from 1/16" to 1" in any bore from ¼" to 3".

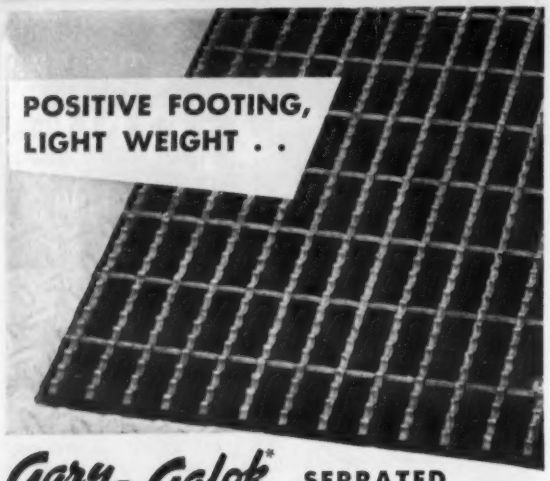
SAVE WITH THESE OTHER STANDARD STOCK BROACHES

SQUARE BROACHES — ⅛" to ¾" holes
HEXAGON BROACHES — ⅛" to ¾" holes
ROUND BROACHES — ¼" to 1" holes

SEND FOR CATALOG AND PRICE LIST
The duMont Corp.
Greenfield, Mass.
MAIL FREE BROACH CATALOG AND PRICE LIST D describing Square Broaches, Hexagon Broaches, Production Type Keyway Broaches and Keyway Broach Kits to

Name.....
Company.....
Address.....
duMont

For more details circle NED-697 F9 on enclosed inquiry slip



Gary Galok* SUPER SERRATED ALUMINUM GRATING

Serrations scientifically designed to provide maximum positive footing. High strength to weight ratio, minimum deflection, maximum safety, corrosion resistant. Bars cannot turn, twist, loosen or fall out. Write for detailed specifications.

Gary SUPER Galok also available with plain bars. Sizes for every need.

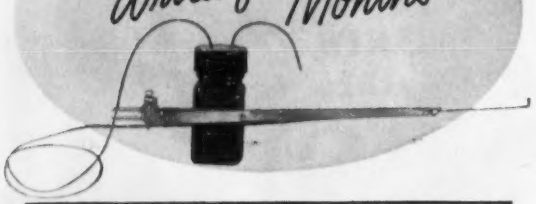
*Patents Pending

Catalog N-69

ROCKWELL-STANDARD CORPORATION
GRATING DIVISION
4017 E. Seventh Ave., Gary, Indiana

▲ For more details circle NED-698 F9 on enclosed inquiry slip ▲

ARCCO CANNON
NEVER-DRY PEN
Writes for Months



REPLACES OTHER MAKES • USES REGULAR INKS

Regardless of pulsations or other causes of ink failures this Never-Dry Pen will make clean and complete records.

CHECK THESE EIGHT FEATURES

1. Always a continuous flow. No unrecorded records.
2. Holds sufficient ink for several months recording.
3. Constant weight for more accurate measurement.
4. Always clean, uniform records due to uniform flow.
5. No ink slopping or dripping in meter cases or on floor.
6. Uses regular recording inks or fast drying inks.
7. Stainless steel assures long and trouble-free service.
8. Used on practically any type of recording instrument.

Now made in 5 sizes. When ordering, specify make and type of recording instrument. Send for Bulletin 110-R2

$6.90 Each Net
Send for Quantity Prices

AMERICAN RECORDING CHART COMPANY
7142 East Condor Street, Los Angeles 22, California

AD NO. 103

▲ For more details circle NED-699 F9 on enclosed inquiry slip ▲

NEW from SIGNODE

Valuable Free Booklet

"BETTER WAYS TO PACKAGE, UNITIZE, AND SHIP"

Here are 48 useful pages of facts about steel strapping methods, tools and equipment to help you simplify and reduce the cost of handling, storing, and shipping.

Describes and illustrates modern, better ways in which steel strapping saves weight, reduces damage, eliminates pilferage, improves stacking and carloading. Describes various kinds of Signode strapping, seals, pneumatic, electric and hand operated strapping tools, dispensers and other accessories.

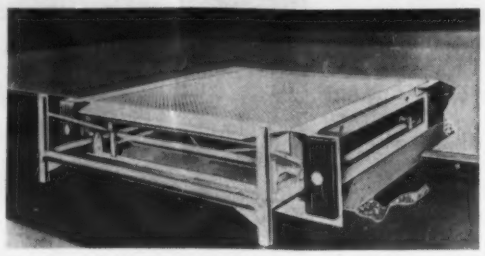
Send now for your free copy.

SIGNODE STEEL STRAPPING CO.
2643 N. Western Avenue, Chicago 47, Illinois
Offices Coast to Coast
Foreign Subsidiaries and Distributors World-Wide
In Canada: Canadian Steel Strapping Co., Ltd., Montreal • Toronto

▲ For more details circle NED-700 F9 on enclosed inquiry slip ▲

TRUCK-DOCK RAMP is self-contained, truck-activated

Available in 6, 8, and 10-ft ramp lengths, this 6-ft wide self-contained Dockbridge can be quickly installed in a pit less than 18 in. deep in the loading dock. The



truck-actuated ramp is hinged at the back. Lip rises to 16 in. above dock level and lowers to 10 in. below. When not in use, ramp sets flush with dock floor and supports 20,000 lb axle load in any direction. Ramp weldment is made of safety checkered steel plate. A center-poise shock absorber allows ramp to float virtually weight-free from its hinges. Made by **American Dockbridge, Inc.**, 235 W. Oklahoma Ave., Milwaukee 7, Wis.

▲ For more details circle NED-701 F9 on enclosed inquiry slip ▲

BARREL TRUCK handles 40-in. high barrels

Improvements made in the Auto-Load barrel truck are an increased operating range of the chime hook to handle 40 in. high barrels and a shortened axle length. Over-all width of truck is narrower than the load, allowing barrels to be spotted in closely packed rows. Truck loads and unloads automatically. The 90-lb truck has 1200-lb capacity and is equipped with 10-in. roller-bearing, demountable rubber-tired or metal wheels. Made by **Nutting Truck & Caster Co.**, 1201 W. Division St., Faribault, Minn.

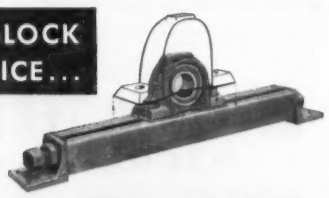
▲ For more details circle NED-702 F9 on enclosed inquiry slip ▲

Uses & Methods of Gold Plating

Engelhard Industries, Inc., Chemical Div.—"Gold for Industry and the Arts" answers questions about the uses and methods of gold plating, and presents facts about the industrial and decorative applications of the precious metal. Its 12 pages cover the various types of gold—24 karat, light yellow, pink, and green. Metals which can be coated by the Atmoex immersion gold solution are given.

▲ For more details circle NED-703 F9 on enclosed inquiry slip ▲

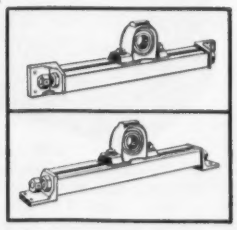
USE PILLOW BLOCK OF YOUR CHOICE...



Versa MOUNT

TAKE-UP FRAME
Mount Side or Top

- Use with any standard pillow block. One basic frame size for all makes and types—ball, roller or babbited.
- Mounts either side or top. Simply loosen locknut and turn mounting flange to desired position.
- Easily installed on old or new equipment.
- Delivery from stock in sizes for ½" to 2⅞" pillow blocks, travel lengths from 2" to 36".
- Mounting screw is totally enclosed for protection against dirt, contamination, etc., yet readily accessible when lubrication or cleaning is desired.
- All parts can be quickly disassembled without special tools and *are individually replaceable.*

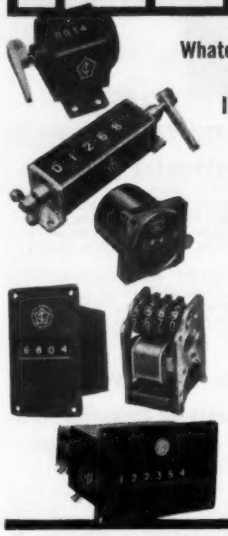


Request Bulletin V-647 and Prices.

LOVEJOY FLEXIBLE COUPLING CO.
4803 W. LAKE STREET • CHICAGO 44, ILLINOIS

▲ For more details circle NED-704 F9 on enclosed inquiry slip ▲

A Complete Line of
COUNTING INSTRUMENTS
from
INTIMEX



Whatever your counting problem, there's a precision-built counter from INTIMEX to solve that problem . . accurately, economically.

You can depend on INTIMEX for rapid delivery of all types of counting instruments, ranging from Small and Medium Size Counters (with or without resets) to High Speed, Quick Reset Electro-Magnetic Counters and Photo Transistor Counters. There's an INTIMEX Counter to insure accuracy in your counting operation . . . INTIMEX takes the thinking out of counting.

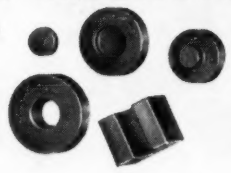
Engineering available on special counting problems.

FREE Literature Available, write:

INTIMEX CORPORATION
Richardson Bldg., Bonifant & Fenton Sts.
Silver Spring, Maryland • (Washington, D. C.)

▲ For more details circle NED-705 F9 on enclosed inquiry slip ▲

for your
magnet problems
F-300 CERAMIC
PERMANENT MAGNETS



- ✓ Economical Piece Price
- ✓ Economical Tooling
- ✓ Prompt Delivery
- ✓ Engineering and Sample Service

for

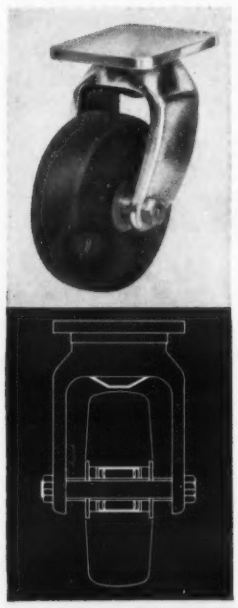
- ✓ Latches
- ✓ Can Openers
- ✓ Toys, Games, Novelties
- ✓ Bulletin Boards
- ✓ Etc.

Write for Brochure 1-59

d. m. STEWARD MANUFACTURING CO.
3620 Jerrome Ave.
Chattanooga 1, Tenn.

▲ For more details circle NED-706 F9 on enclosed inquiry slip ▲

New Sanitary Caster



Meets Baking Industry Sanitation Standards

New "B-line" sanitary casters are top quality Bassick casters with unique features designed specifically for use in processing or handling food, baked goods, beverages, pharmaceuticals and other applications where sanitary cleanliness is important.

The new 4" and 5" wheel casters (swivel and rigid models) are constructed in a smooth aluminum alloy with no projections or cracks to pick up dirt. A minimum half-inch clearance between wheel and horn, sealed bearings, and rust-resistant finish facilitate cleaning. Non-marking, smooth-sided wheels with flush fitting thrust washers enhance sanitary design. Write for more facts: THE BASSICK COMPANY, Bridgeport 5, Conn. *In Canada:* Belleville, Ont. 9.13

Symbol of Excellence SW Bassick A DIVISION OF STEWART-WARNER CORPORATION

▲ For more details circle NED-707 F9 on enclosed inquiry slip ▲

BECKER

HAS IT... OR CAN MAKE IT—
if it's CARBON or GRAPHITE!

A dependable source for everything in Carbon and Graphite

Graphite Cores and Chills—Graphite Powder and Particles of any mesh... complete Graphite Fabrication Facilities.

BRUSHES . . . for all motor and generator applications . . . carbon, graphite, copper leaf, gauze and metal-graphite.

WELDING ELECTRODES, WELDER BRUSHES . . . Keen-Cut Electrodes for carbon arc-air jet cutting . . . Keen-Arc Carbons, cored and heavily copper coated, for twin-arc torches . . . paste, rods and plates.

EXTRUSIONS, MOLDED SHAPES OR SPECIAL CARBONS designed and produced to your specifications.

SEND FOR CATALOG

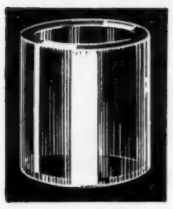
COMPLETE BECKER ENGINEERING SERVICE is always available and entails no obligation whatever

BECKER BROTHERS CARBON CO.
3454 South Laramie Ave. • Cicero 50, Illinois
Telephone: BI 2-1260 • Chicago

▲ For more details circle NED-708 F9 on enclosed inquiry slip ▲

SWIFT

carries a complete stock of



GAUGE GLASS and CYLINDERS

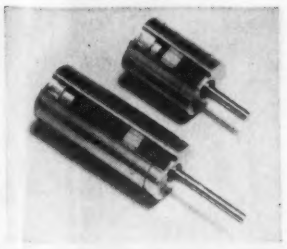
Need Gauge Glass or Cylinders in a hurry? Then write, wire or phone Swift for immediate delivery.

We have a complete stock of Pyrex Tubular Gauge Glass and Cylinders on hand for chemical, pharmaceutical or industrial applications. Supplied in any length or finish from 2 mm. O.D. to 7" O.D.

SWIFT *Glass Division*
SWIFT LUBRICATOR COMPANY, INC.
5 Glass St., Elmira, N.Y.

▲ For more details circle NED-709 F9 on enclosed inquiry slip ▲

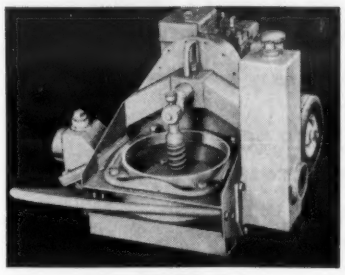
MECHANICAL LIMIT STOPS have 10.5 and 42 turns maximum



Starting torque of these infinitely adjustable mechanical limit stops is 0.1 oz-in. maximum, and torque capacity is 60 oz-in. Offered in two sizes with 10.5 and 42 turns maximum, they have a 0.937-in. diameter and housing lengths of 1¼ and 2¼ in. Shaft lengths are ¾ and 1 in., respectively, and shaft diameter is 0.1873 in. Energy storage at the limits to reduce shock in gear trains is 0.5 oz-in. Made by **Gap Instrument Corp.**, 116 E. Merrick Rd., Freeport, L. I., N. Y.

▲ For more details circle NED-711 F9 on enclosed inquiry slip ▲

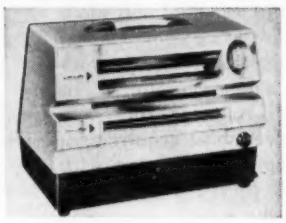
DIAPHRAGM PUMPS rated 3500-6000 gph at 5-ft lift



Variety of sizes, power drive options, wheel or skid mounts, and capacities available in the redesigned and expanded line of diaphragm pumps enables it to handle most seepage and dewatering applications. The 1½ to 4-in. pumps have capacities from 3500 to 6000 gph at a 5-ft lift. Integrally fabricated frame, waterbox, and drive bearing supports contribute to strength and light weight and minimize vibration. Made by **Barnes Mfg. Co.**, 531 N. Main, Mansfield, Ohio.

▲ For more details circle NED-712 F9 on enclosed inquiry slip ▲

SINGLE-UNIT PHOTOCOPIER fluid supply is sealed in



Fingers of operator never touch the sealed-in fluid supply of the Contouramatic Mark II single-unit photocopier. This Seal-Pak system makes use of convenient sealed vinyl bags to contain the processing fluid. Unit reproduces any mark made by black or colored pencils, regular or ballpoint pens, stencils, rubber stamps, spirit duplicators, chalk, crayons or grease pencils, as well as typing and fine printing. It makes black and white copies up to 9 in. wide on card stock, colored papers, transparencies, and diazo films. Integral paper dispenser is contained in the base. Unit lists for $189. Made by **F. G. Ludwig, Inc.**, 151 Coulter Place, Old Saybrook, Conn.

▲ For more details circle NED-713 F9 on enclosed inquiry slip ▲

USG® FRACTIONAL H. P. BRUSHES

THESE USG BRUSHES CAN HELP YOU OBTAIN MORE DEPENDABLE SMALL-MOTOR PERFORMANCE

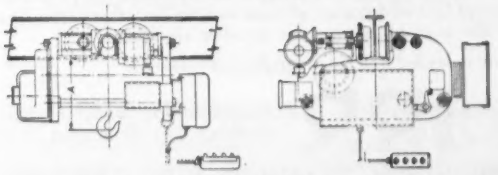
If you manufacture fractional horsepower motors, it will pay you to install USG Brushes to get the most efficient operation from your product. USG Brushes are doing an efficient job for manufacturers of appliances, hand tools, fans, and similar units. To check your specifications with our materials, write for our new Catalog B-56 and the new USG Grade List . . . you'll find them a great help in designing.

221
THE UNITED STATES GRAPHITE COMPANY
DIVISION OF THE WICKES CORPORATION • SAGINAW 10, MICH.

▲ For more details circle NED-714 F9 on enclosed inquiry slip ▲

NEW "LOWS IN HANDLING COSTS...

benefit from Low Price, Low Headroom, Low Maintenance with the NEW LO-HED® 4-Wheel Motor Trolley Hoist



Just look at these headroom figures—they can't be beaten

Headroom*	Capacity	Height of Lift	Speed in FPM Hoist	Speed in FPM Trolley
11 in.	1-1½-2	20 ft.	15-35	45
14 in.	2-3	20 ft.	25-16	60
19 in.	3	15 ft.	18-24	45
15 in.	4	20 ft.	16	60
25 in.	5	15 ft.	14	60
26 in.	6	15 ft.	12	60

*Figures apply to hoists using A.C. current.

Check these features—no other comparable hoist offers as much

Trolley	Hoist
Steel construction	Straight line spur gear drive
Single speed	Heavy-duty roller bearings
Push-button control	Heavy-duty controller
110V pilot circuit	Heavy-duty hoist motor
Cast-steel drive wheels	Automatic holding brake
Tapered roller bearings	Automatic lowering brake

Available for both A.C. and D.C. — all voltages and frequencies.

Any way you look at it, you won't find a better hoist for your materials handling dollar. Send for details today — just fill out and mail the coupon.

AMERICAN ENGINEERING COMPANY
Wheatsheaf Lane and Sepviva Street
Philadelphia 37, Pennsylvania
Branch Offices in: Jersey City • Cleveland • Chicago

Canadian Subsidiaries:
Affiliated Engineering Corporations, Ltd.
Montreal, P.Q.

Bawden Industries, Ltd.
Toronto, Ont.

AE Products are:
TAYLOR, PERFECT SPREAD and VIBRA-GRATE STOKERS, HELE-SHAW and HYDRAMITE FLUID POWER, LO-HED HOISTS, LO-HED CAR PULLERS, MARINE DECK AUXILIARIES

To: American Engineering Company H-172
Wheatsheaf Lane and Sepviva Street
Philadelphia 37, Pennsylvania

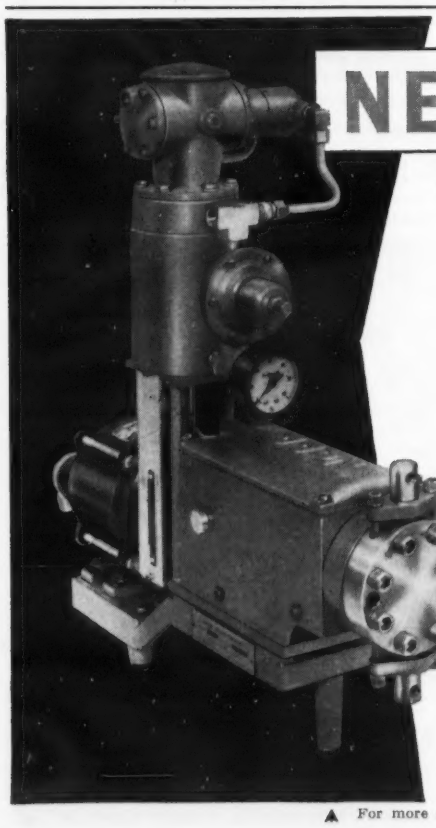
I am interested in the new LO-HED. Please quote me the new "low" for a hoist with the following specifications:

Capacity..... tons I-Beam Size.....
Current.....

Name.....
Title.....
Company.....
Street.....
City..... Zone..... State.....

DISTRIBUTORS AND AGENTS: Distributorships and agencies for Lo-Hed Electric Hoists are available in many parts of the country. If you are interested, call or write Ed Boyer, Sales Manager, A-E's Materials Handling Division.

▲ For more details circle NED-715 F9 on enclosed inquiry slip ▲



NEW auto-pneumatic "MICROFLO" PULSAFEEDER

Pumps Liquids at Micro-Flow Rates
Regulated by Pneumatic Control Instruments

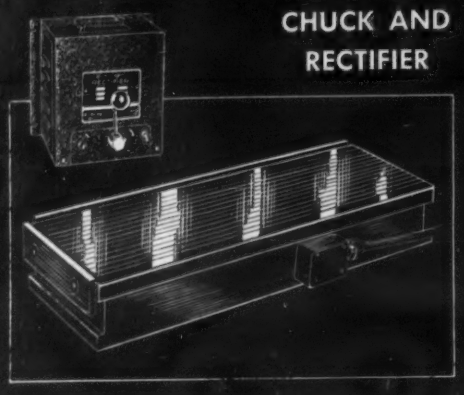
Now, a controlled-volume chemical pump that varies micro-flow rate of output automatically to a changing process condition. All liquid handling parts of corrosion resistant materials . . . no stuffing box or running seal . . . *no leakage or contamination.* Four models available with flow range from 585 ML per hour up to 1.2 gph. Pressure up to 3000 psig. Other Pulsafeeder models for higher flow, higher pressures.

Write for Bulletin 500-A containing complete specifications. Lapp Insulator Co., Inc., Process Equipment Division, 3308 Poplar St., Le Roy, N. Y.

Lapp PULSAFEEDER
CONTROLLED VOLUME CHEMICAL PUMP

▲ For more details circle NED-710 F9 on enclosed inquiry slip ▲

MAGNA-LOCK combination CHUCK AND RECTIFIER



On bench work, on surface grinders, jobs go faster. Light weight, easy to handle. Simply plug into A.C. line. Seven sizes from 5" x 10". Write Dept. NH69.

Hanchett MAGNA-LOCK CORPORATION
BIG RAPIDS, MICHIGAN, U.S.A.

▲ For more details circle NED-716 F9 on enclosed inquiry slip ▲

cut production time and costs with **INDUSTRIAL RETAINING RINGS**

Save material, eliminate costly machining and tooling, speed assembly with precision-made INDUSTRIAL Retaining Rings. They can be re-used over and over again because of their lasting resiliency and sustained circularity.

Internal, external and open types are available for immediate delivery in a wide range of sizes and finishes. Open-type rings are also available stacked for speedier assembly.

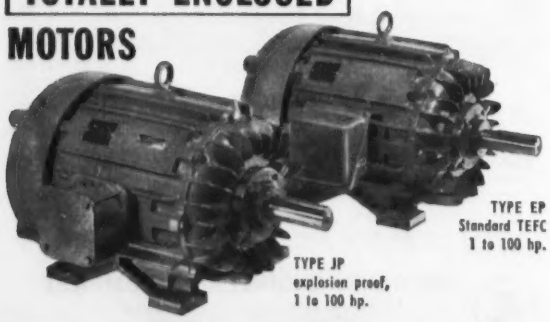
Write today for free ring samples and catalog.

IRR *Originators of modern retaining ring dispensing*

INDUSTRIAL RETAINING RING COMPANY
Dept. N6, 57 Cordier Street • Irvington 11, New Jersey

▲ For more details circle NED-717 F9 on enclosed inquiry slip ▲

WAGNER TOTALLY ENCLOSED MOTORS



GIVE YOU EXTRA PROTECTION

Wagner Type EP Motors offer protection against corrosion, dust, abrasives, fumes, steel chips or filings. Type JP is explosion proof as well.

Motors are built in new NEMA Frame sizes from 182 through 445U, with ribs that add mechanical strength and increase surface cooling area.

Contact the nearest Wagner Branch Office or write for Bulletin MU-224.

WM59-7A

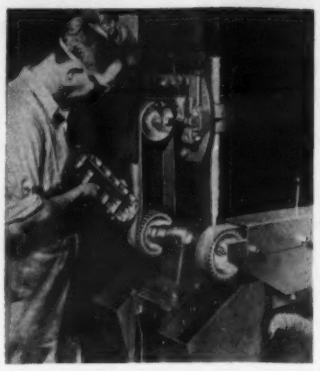
Wagner Electric Corporation
SERVING INDUSTRY SINCE 1891

6435 PLYMOUTH AVENUE
ST. LOUIS 14, MO.

MOTORS • BEARINGS • STANDARD ROTORS
BRUSHES • CAPACITORS • COMMUTATORS

▲ For more details circle NED-718 F9 on enclosed inquiry slip ▲

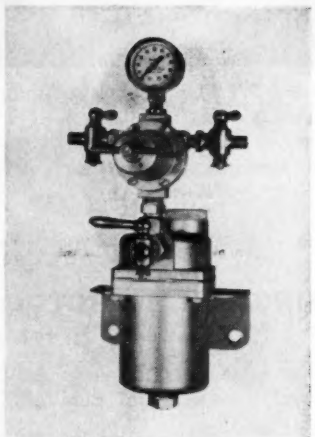
BELT GRINDERS
2½-in. wide units run at 5400 fpm



Versatile, relatively low-cost, 2½-in. wide belt grinders for buffing, deburring, and grinding provide belt speed of 5400 fpm using a 6-in. contact roll and 1725-rpm motor. Grinders are offered in single horizontal, double horizontal, horizontal and vertical, and double vertical setups. Accessories include a vertical support unit, safety guards, dust and chip chute, adjustable platen, dust collector, and an adjustable tool rest. An arbor head, rubber contact wheel, 2¾ in. backstand idler unit, and an abrasive belt are standard. Price, without motor and switch, for single horizontal setup is $129.50. Made by **Rockwell Mfg. Co.**, Walker Turner Div., Dept. 1007, 400 N. Lexington Ave., Pittsburgh 8, Pa.

▲ For more details circle NED-719 F9 on enclosed inquiry slip ▲

AIR MOISTURE EXTRACTOR
also regulates pressure in line



Automatic in operation, the Air Transformer moisture extractor starts when air flow starts, stops when air flow stops, and requires no manual drainage. It supplies clean, dry air for pneumatic applications. Its main components are the automatic baffle type water separator which removes and dumps all of the moisture present in air lines, and an air pressure regulator. The self-relieving unit is offered in three models which meet most requirements. It is also offered as a water separator only or with one or two regulators. Made by **Spee-Flo Co.**, 6614 Harrisburg Blvd., Houston 11, Tex.

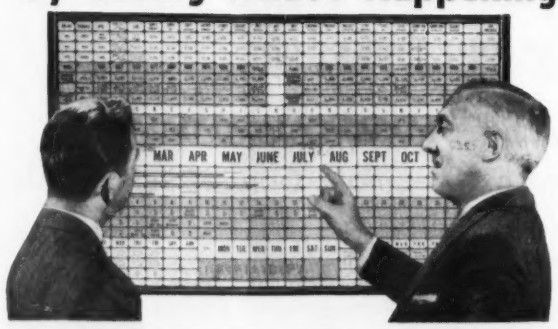
▲ For more details circle NED-720 F9 on enclosed inquiry slip ▲

Liquid Level & Flow Control

McDonnell & Miller, Inc.—How to provide operating and safety controls for a variety of jobs involving liquid level and flow control is aim of illustrated Bulletin ERS-A. Float-operated valves and switches and flow switches are described in detail. Engineering information and schematic drawings are given for each.

▲ For more details circle NED-721 F9 on enclosed inquiry slip ▲

You Get Things Done Better By Seeing What's Happening



BOARDMASTER VISUAL CONTROL

★ Gives Graphic Picture of Your Operations in Color.
★ Facts at a Glance-Saves Time and Prevents Errors.
★ A Simple, Flexible Tool-Easily Adapted to Your Needs.
★ Easy to Use. Type or Write on Cards, Snap on Board.
★ Ideal for Production, Scheduling, Sales, Inventory, Etc.
★ Compact, Attractive. Made of Metal. 350,000 in Use.

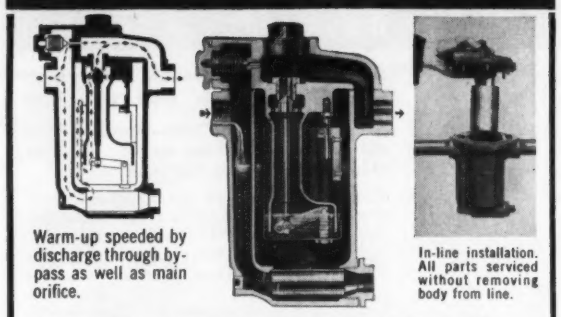
Complete Price $49.50 Including Cards

FREE 24-Page ILLUSTRATED BOOKLET N-200 Without Obligation

GRAPHIC SYSTEMS, 55 West 42nd St., New York 36, N. Y.

▲ For more details circle NED-722 F9 on enclosed inquiry slip ▲

Now—A Steam Trap that Adjusts Automatically to Every Operating Condition!



Warm-up speeded by discharge through by-pass as well as main orifice.

In-line installation. All parts serviced without removing body from line.

AUTOMATICALLY REGULATES FOR FASTER WARM-UP AND TO KEEP OPERATING TEMPERATURE AT PEAK HEAT

Proven bucket design with built-in accessories. By-pass thermostat increases discharge for warm-up and overload conditions. Thermostat compensated to operate at 10° below saturated steam temp. Wright-Austin Airxpel principle provides for mechanical discharge of air after Thermostatic by-pass has closed.

WRITE FOR BULLETIN 808

WRIGHT-AUSTIN COMPANY
3245 WIGHT STREET • DETROIT 7, MICH.

▲ For more details circle NED-723 F9 on enclosed inquiry slip ▲

NEW DRILL CUTS MAINTENANCE COSTS

Here's a low cost, high power ¼" drill that's ideal for routine repairs and maintenance. Use it instead of production drills which can get lost or stray if they're taken off their regular jobs. This new drill has all the power you need. 2250 RPM for high torque. Rugged ball-bearing armature. It's one of the most useful and economical electric tools in any shop.

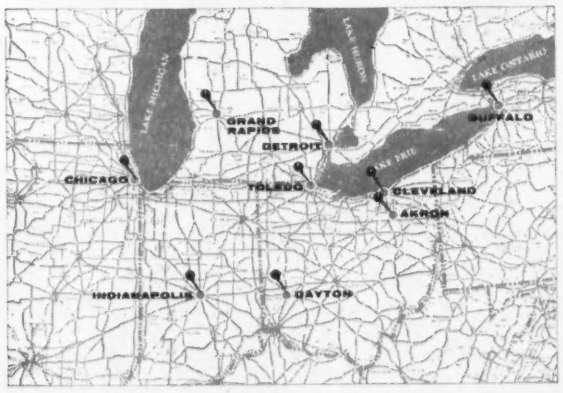
MILLERS FALLS TOOLS SINCE 1868

MILLERS FALLS COMPANY
Dept. NED-8
Greenfield, Massachusetts

▲ For more details circle NED-724 F9 on enclosed inquiry slip ▲

PENINSULAR'S Team of 9 Steel Service Centers working together to give you STEEL plus SERVICE

America's Largest Independent Tool Steel Distributor



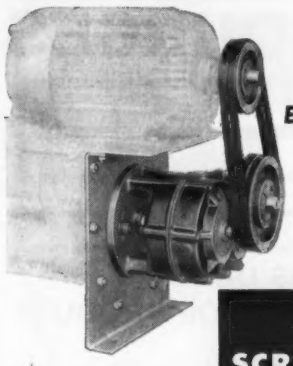
TOOL STEELS • ALLOYS • COLD DRAWN • HOLLOBAR
FLAT GROUND STOCK • DRILL ROD • PLATE

Over 40 Years of Service to Industry

PENINSULAR STEEL COMPANY
24401 GROESBECK • P. O. BOX 3853 • DETROIT 5, MICHIGAN
DREXEL 1-9400 • PRESCOTT 8-2121

DETROIT • CLEVELAND • INDIANAPOLIS • TOLEDO • AKRON • DAYTON • CHICAGO • GRAND RAPIDS • BUFFALO

▲ For more details circle NED-725 F9 on enclosed inquiry slip ▲



Entirely New!

Entirely Different!

DODGE SCREW CONVEYOR DRIVE

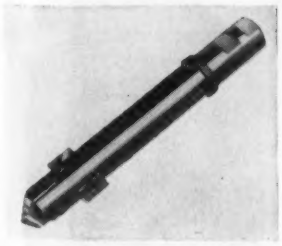
A complete package drive, including (1) rugged, high efficiency reducer — Timken Bearing equipped throughout, (2) quick-removable driving shaft, (3) external packing gland, (4) trough end, optional. Provides amazing new ease of installation—new ease of maintenance—new economy. No motor base—no thrust bearing. Ask your Dodge Distributor or write us for technical bulletin.

DODGE MANUFACTURING CORPORATION, 2100 Union St., Mishawaka, Ind.

DODGE of Mishawaka, Ind.

For more details circle NED-726 F9 on enclosed inquiry slip

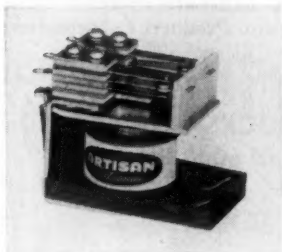
SPADE DRILL-FINISH REAMER
drills, finishes in single stroke



Large diameter holes can be rapidly produced to close tolerances with a good finish by the Clark combination spade drill and floating finishing reamer. It drills and finishes holes to size with a single quill stroke of the machine. Cam lock design enables the adjustable cutter to center itself in the hole. Replaceable spade drill is M-3 high speed steel and the finishing cutters are M-3 high speed steel or carbide tipped. Tool is made with any shank size to specifications. Made by **Robert H. Clark Co.**, 9330 Santa Monica Blvd., Beverly Hills, Calif.

For more details circle NED-729 F9 on enclosed inquiry slip

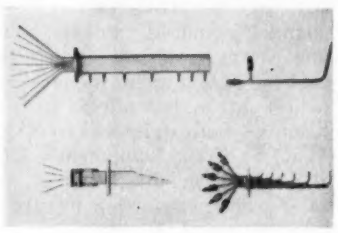
MULTIPURPOSE RELAY
features nylon blade lifter



Large contact wiping area and high contact pressure are built into the Model RH relay. The 3-oz, low cost, multipurpose unit has a nylon blade lifter and is suited for industrial control and electronic equipment, vending machines, and other uses. Voltages up to 230 v ac and 110 v dc are available with up to four-pole double-throw contact arrangements and choice of 5 or 10-amp contacts. Size is 2 x 1 x 1 11/16 in. Made by **Artisan Electronics Corp.**, 171 Ridgedale Ave., Morristown, N. J.

For more details circle NED-730 F9 on enclosed inquiry slip

SENSING PROBES & RAKES
measure heat, velocity, and thrust



Temperature and pressure sensing probes and rakes can be fabricated to specification in any of the 300 stainless steel series, Inconel, Hastelloy, brass, or copper. They measure heat, velocity, or thrust of propulsion systems, nuclear reactors, automotive turbines, and heat treating furnaces. Probes include types for total pressure, static pressure, pitot static, low temperature to 1500° F, high temperature to 2500° F, and water cooled to 4000° F. Rake types include bellmouth, compressor, turbine, and water cooled. Made by **Pemco, Inc.**, Instrument Div., 5663 Brecksville Rd., Cleveland 31, Ohio.

For more details circle NED-731 F9 on enclosed inquiry slip

Famous G.S. Precision Guards Your Production

Whether you need hundreds or thousands, G.S. gives you a degree of UNIFORM accuracy *unapproached by any other Small Gear maker in the world!* That assures smooth, dependable performance and low assembly costs.

G.S. Small Gearing is mass-produced in a range of sizes from 8 to 96 dp . . . from 1/8" to 8" diameters, and from any Gear material. Capable G.S. engineers will gladly help you develop the ONE best and most economical design for your specific needs. Send drawings and specifications or a complete description.

SEND FOR FREE Illustrated Small Gearing Guide

FRACTIONAL HORSEPOWER GEARING

GEAR Specialties, Inc.

Spurs • Spirals • Helicals • Bevels • Internals • Worm Gearing

2635 WEST MEDILL AVENUE, CHICAGO 47, ILLINOIS

WORLD'S LARGEST EXCLUSIVE MANUFACTURERS OF FRACTIONAL HORSEPOWER GEARS

For more details circle NED-727 F9 on enclosed inquiry slip

THE NEW 303 IS

Versatile

Available in four sizes -- with many optional features. Work held either mechanically or by vacuum.

NEW MODEL 303

✓METALS
✓PLASTICS
✓WOODS

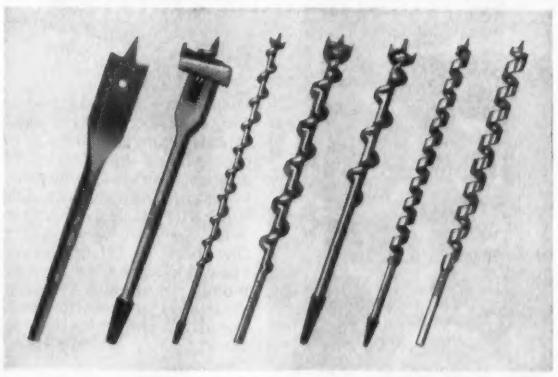
New single roll table type in four sizes. Hydraulic travel: in, out and sidewise. Delicate automatic counterbalancing assures sensitive floating action for flat or contoured surfaces. Quick-Change spindle. Max. floor space: 6' - 10" wide x 10' - 7" deep. Wt. approx. 6,000 lbs. Model 303 can be shipped assembled. Let us know YOUR requirements.

CLAIR MANUFACTURING CO., Inc., OLEAN, N.Y.

Offering the Most VERSATILE Line of Surface Finishing Machines

For more details circle NED-728 F9 on enclosed inquiry slip

FASTER BORING
high-quality Greenlee tools



Jobs go smoother, faster when you standardize on precision-made GREENLEE boring tools. Power drill and hand brace types . . . various styles and lengths for all electrical and plant maintenance work: Solid-Center Auger Bits, Expansive Bits, Electricians' Bits, Ship Augers, Extensions. Power Bits feature new GREENLEE hex shank for positive, nonslip drive. See your distributor or write for literature.

OTHER GREENLEE TIMESAVING TOOLS: CONDUIT AND PIPE BENDERS, KNOCKOUT PUNCHES AND DRIVERS, PIPE PUSHERS.

GREENLEE TOOL CO. GREENLEE

1771 Columbia Ave., Rockford, Illinois

For more details circle NED-732 F9 on enclosed inquiry slip

REPAIR SHOP IN A BOX

Snap-on 5172-GS-B Tool Set (1/4" to 1 1/4" wrench size range)

Service factory machinery, engines, cars, trucks and plant utilities with 172 tools . . . all in one portable, "quick-select" chest. It'll meet practically all of your general service requirements.

We can help you solve maintenance or service problems with tool sets specially tailored to meet your needs. Call the nearest *Snap-on* branch or write direct.

SNAP-ON TOOLS CORPORATION

8110-F 28th Avenue • Kenosha, Wisconsin

For more details circle NED-733 F9 on enclosed inquiry slip

Wait a minute! adding to your warehouse?

Has it ever occurred to you that you may have sufficient space—if you can put it to proper use?

Let PALTIER trained Materials Handling Engineer take a look. With properly selected equipment and flow of materials your present storage area may be adequate! Storage equipment COSTS LESS than NEW FLOOR SPACE!

PALTIER STORAGE SYSTEMS are designed jointly by industrial architects, structural and materials handling engineers.

Write today to . . .

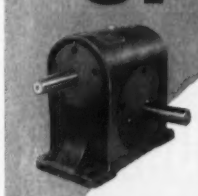
THE PALTIER CORPORATION

1705 Kentucky Street • Michigan City, Indiana

DISTRIBUTORS IN PRINCIPAL CITIES

For more details circle NED-734 F9 on enclosed inquiry slip

SPECIAL GEAR BOXES



Announcing a new Sewall Service

Designing . . . Development . . . Manufacturing . . . to help solve your special gear box problems. We're ready to work with you at any stage of your project's development. From scratch . . . we'll design your gear boxes . . . just give us your basic idea. From your prints . . . let us submit our quotation on your requirements. We invite your inquiry . . . check Sewall Service today.

Complete gear service . . . custom made gears . . . made-to-order sprockets . . . special gear racks—to order . . . standard gear racks in stock

SEWALL GEARS

E. B. SEWALL MFG. CO., Dept. D
705 Raymond Ave., St. Paul 14, Minn. Midway 5-7721

For more details circle NED-735 F9 on enclosed inquiry slip

Cuts Practically Any Material

Porter-Cable

BAYONET SAW

EXTRA HEAVY DUTY FOR INDUSTRIAL USE

Zips through hard and soft woods, ferrous and non-ferrous metals, plastics, etc. Makes intricate, straight or angle cuts . . . even plunge cuts with no starting hole! The easy-to-use, versatile tool for every industrial and maintenance shop. Designed and built for all-day performance. Thousands in use throughout industry. Ask your industrial distributor or write for folder 207.

MODEL 548

$99.50

Porter-Cable

Quality Power Tools

PORTER-CABLE MACHINE COMPANY
9126 Marcellus Street
Syracuse, N. Y.

For more details circle NED-736 F9 on enclosed inquiry slip

Wherever you use compressed air...

...just

PLUG IN THE POWER

with the HANSEN Series RL QUICK-CONNECTIVE Ring-Lock Coupling

- Tough . . . compact . . . smaller . . . lighter.
- Quick connection — and disconnection.
- Instant automatic flow or shut-off.
- Handles any job in your shop using ¾" to ⅛" connections—from the air line to the air tool.
- Locking ring provides positive lock . . . tight fit. Equipped with automatic sleeve lock.
- All Series 2-RL Sockets and Plugs are interchangeable — likewise all Series 3-RL Sockets and Plugs. Eliminates any need for various size couplings in hook-up — makes it easy to keep stock of parts in balance—holds inventories to a minimum.

Handles More Air... with Minimum Pressure Drop

Write for the Hansen Catalog . . a ready reference when you want information on couplings in a hurry.

Representatives in Principal Cities

THE HANSEN MANUFACTURING COMPANY
4031 WEST 150th STREET • CLEVELAND 35, OHIO

For more details circle NED-737 F9 on enclosed inquiry slip

NEW! Bausch & Lomb VERNIER MAGNIFIER

Now you can read vernier calipers, height gauges, metal rules easier and with more accuracy with NEW pocket-size, non-breakable B&L VERNIER MAGNIFIER.

- Provides clear, undistorted view of scale lines and figures.
- Permanent Alnico magnets affix it securely to any ferrous metal.
- Clear plastic body admits all available light.

$2.50

WRITE for free descriptive literature and catalog of full line of B&L magnifiers; also name of supplier nearest to you. Bausch & Lomb Optical Co., Rochester 2, N. Y.

BAUSCH & LOMB

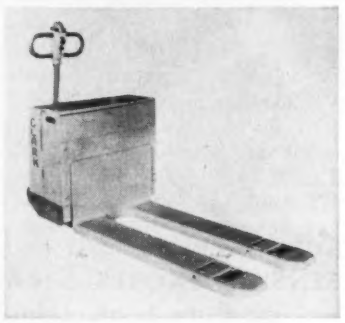
For more details circle NED-738 F9 on enclosed inquiry slip

PORTABLE TACHOMETERS
transistorized units operate on 2 w

Transistorized Series 7100 tachometers which measure speed without physical loading will operate on less than 2 w of power obtained from 117-v 60 cycle supply. Signals from magnetic pickup, used to sense angular velocity of a rotating gear or shaft, are converted to direct current directly proportional to signal frequency. Accuracy of Weston meter, calibrated in rpm units, is within 1 per cent of full scale deflection. Model 7101 measures 0-2000 rpm speeds; Model 7102, speeds to 5000 rpm; and Model 7103, 0-10,000 rpm. Units are also available mounted on 19-in. steel rack panel. They can be ordered in either explosionproof or JIC enclosure. Portable units are operated from mercury cells. Made by **Electro Products Laboratories**, 4501 N. Ravenswood Ave., Chicago 40, Ill.

For more details circle NED-739 F9 on enclosed inquiry slip

POWERED HAND TRUCKS
improved 4000 and 6000-lb models



Redesigned battery-powered Powrworker hand trucks in 4000 and 6000-lb lift capacities now have leakproof piston type cylinders. Protective covering for hydraulic system is now an integral part of the frame. Drive unit has also been redesigned to provide as high as 33:1 gear reduction. Other changes include lift linkages which provide longer life and stronger, lighter forks. Low lift platform and low lift pallet trucks are available. Former now has a 5-in. lift and is offered in 6, 9, and 10¾-in. down heights. Both units will travel 2.3 mph with full load. Made by **Clark Equipment Co.**, Industrial Truck Div., 1952 Arze St., Battle Creek, Mich.

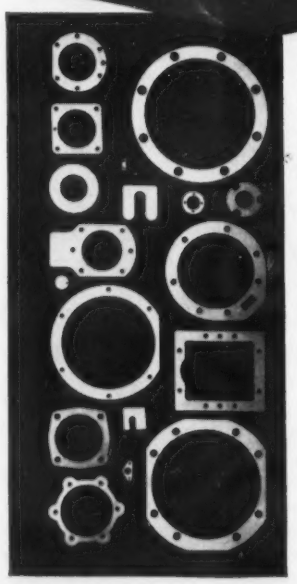
For more details circle NED-740 F9 on enclosed inquiry slip

Latches

Simmonds Aerocessories, Inc.—30-page brochure on Simmonds line of general purpose and high strength latches includes drawings suited for tracing purposes. Housings may be traced from one set of pages and suitable fittings from a matching set of pages. Specifications, design features, and applications are covered in detail.

For more details circle NED-741 F9 on enclosed inquiry slip

LOOKING FOR SAVINGS on GASKETS, SHIMS, WASHERS?



Over more than 50 years, Chicago-Wilcox has accumulated a wide variety of dies which enable us to supply many of your gasket, shim and washer needs **without a die charge.** Whether you need just a few items or large quantities, this can save you money and speed delivery. Available in metallic, non-metallic and plastics to meet your production requirements.

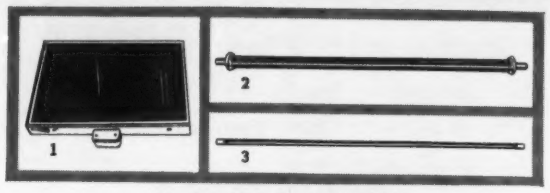
Write for Catalog and prices.

Ask about WIL-PAK PLASTIC SHIM STOCK that identifies thickness both by color and gauge number. Write for Bulletin No. 570.

CHICAGO-WILCOX MFG. CO.
7713 South Avalon Avenue
Chicago 19, Illinois

For more details circle NED-742 F9 on enclosed inquiry slip

HEAT SOURCES



3 GLASS UNITS FOR YOUR PROCESS OR PRODUCT

1. PYREX BRAND RADIANT PANEL—Durable flat glass, coated with a material that conducts electricity, serves as area source of uniform heat. Long wave output readily absorbed by all colors. In squares and rectangles; up to 15 watts per sq. in. Complete—panel, mounting frame, reflector, hangers, junction box, leads. Ask for Bulletin PE-60.

2. HEAT SHEATH—Resistance wire element is enclosed in VYCOR brand glass tubing that's immune to thermal shock. Red or clear tubing, ⅝" O.D. Attractive, safe, easy to keep clean. 500 watts per linear foot. Ask for details.

3. RADIANT TUBES—New, very unusual. Glass rod ¼" in diameter has fired-in coating that conducts electricity. Output is 50 watts per 6 inches of rod. Inquiries invited.

CORNING GLASS WORKS
56 Crystal Street, Corning, New York
CORNING MEANS RESEARCH IN GLASS

For more details circle NED-743 F9 on enclosed inquiry slip

Tempilstik°

temperature indicating crayons*

*Also Tempil° Pellets and Tempilaq° (liquid form)

Tempilstik°—a simple and accurate means of determining preheating and stress relieving temperatures in welding operations. Widely used in all heat treating—as well as in hundreds of other heat-dependent processes in industry. Available in 80 different temperature ratings from 113°F to 2500°F . . . $2.00 each.

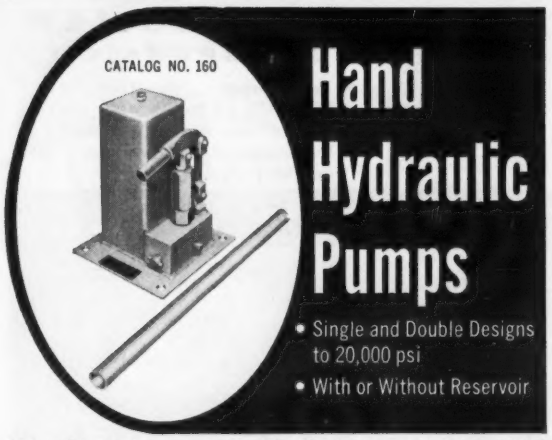
Send for free sample Tempil° Pellets. State temperature desired . . . Sorry, no sample Tempilstiks°.

Most industrial and welding supply houses carry Tempilstiks° . . . If yours does not, write for information to:

ADVERTISING DIVISION

Tempil° CORPORATION
132 West 22nd St., New York 11, N. Y.

For more details circle NED-744 F9 on enclosed inquiry slip



160 cubic inch reservoir with 8"x 8" base plate and 18" long handle.

Available with optional size pistons ⅜", ½", ¾", 1" and 1½".

We specialize in the manufacture of hand pump units which operate in temperatures from −65° F. to +160° F. and with any capacity reservoirs required. Pumps can be furnished on special order with custom seals to handle various aircraft types of fuels such as Pydraul, Skydrol, Oronite, etc.

The single pump with ½", ¾", 1" or 1½" piston is now available in stainless steel.

for additional information write:

WILLIAM S. PINE

hydraulic hand pumps for 1001 uses

1635 East 22nd St., Los Angeles 11, Calif.

▲ For more details circle **NED-745 F9** on enclosed inquiry slip ▲

HORIZONTAL DOORS:

heavy-duty weathertight

spring-balanced for easy opening!

Choose Bilco doors to replace those ponderous, old-fashioned floor- and sidewalk-access doors. Bilco spring-balanced doors feature built-in drainage, long trouble-free life.

FREE CATALOG

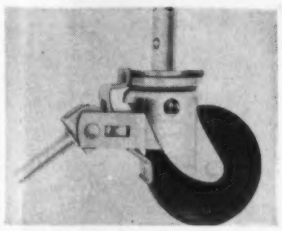
Tells all you need to know about sidewalk and basement doors, roof scuttles, ceiling doors and flush floor doors; measurements, weights, specification data!

Bilco The Bilco Co., Dept. A166 New Haven Conn.,

HORIZONTAL SPRING-OPERATED DOORS

▲ For more details circle **NED-746 F9** on enclosed inquiry slip ▲

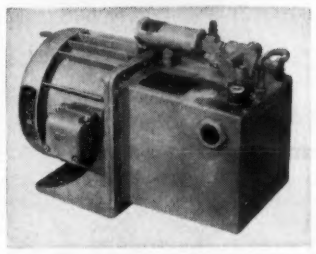
SCAFFOLD CASTERS
175-500 lb capacity locking type



Stem type CL900 Series scaffold casters have a foot or hand - operated dual locking device which prevents both rolling and swiveling. Load capacities are 175 to 500 lb each. The main load, lower thrust ball bearings are protected from dust, water, and other foreign matter. Casters are made with 5, 6, and 8-in. drawn steel, semisteel, rubber tired, vulcanized, semipneumatic, Ruberex, Rockite, and Plaskite wheels. Companion CPL900 Series plate type scaffold casters have similar features and capacities. Made by **Faultless Caster Corp.**, 1521 N. Garvin St., Evansville 7, Ind.

▲ For more details circle **NED-748 F9** on enclosed inquiry slip ▲

HYDRAULIC POWER UNIT
delivers up to 2500 psi



Aluminum reservoirs and brackets provide high heat dissipation and prevent rust and corrosion in this hydraulic power unit. Compact wafer type motors drive ½ to 30-gpm pumps developing up to 2500 psi. Both alternating and direct current units are offered with various attachments. Power unit shown has an external line filter and adjustable relief valve. Made by **Spencer Hydraulics, Inc.**, 2048 Clark St., Racine, Wis.

▲ For more details circle **NED-749 F9** on enclosed inquiry slip ▲

DUCTILE IRON FITTINGS
are glassed to resist chemicals

Thermal shock resistance is substantially increased in these glassed ductile iron fittings available in 45 and 90-degree elbows, tees, and crosses in 1½, 2, 3, 4, and 6-in. sizes. Minimum tensile strength of 60,000 psi is virtually unaffected by high temperature firing employed in the glassing process. Glassed ductile iron resists acids, except hydrofluoric, at temperatures to 350° F and under specific circumstances to 450° F. It also resists most alkalies at moderate temperatures and has little product adherence. Made by **Pfaudler Co.**, 1088 West Ave., Rochester 3, N. Y.

▲ For more details circle **NED-750 F9** on enclosed inquiry slip ▲

Slips cost more than Multigrip

You can help eliminate many slips and falls by installing USS Multigrip Floor Plate in dangerous locations such as machine shop floors, runways, loading platforms, stairs and catwalks. There's no maintenance—it lasts indefinitely.

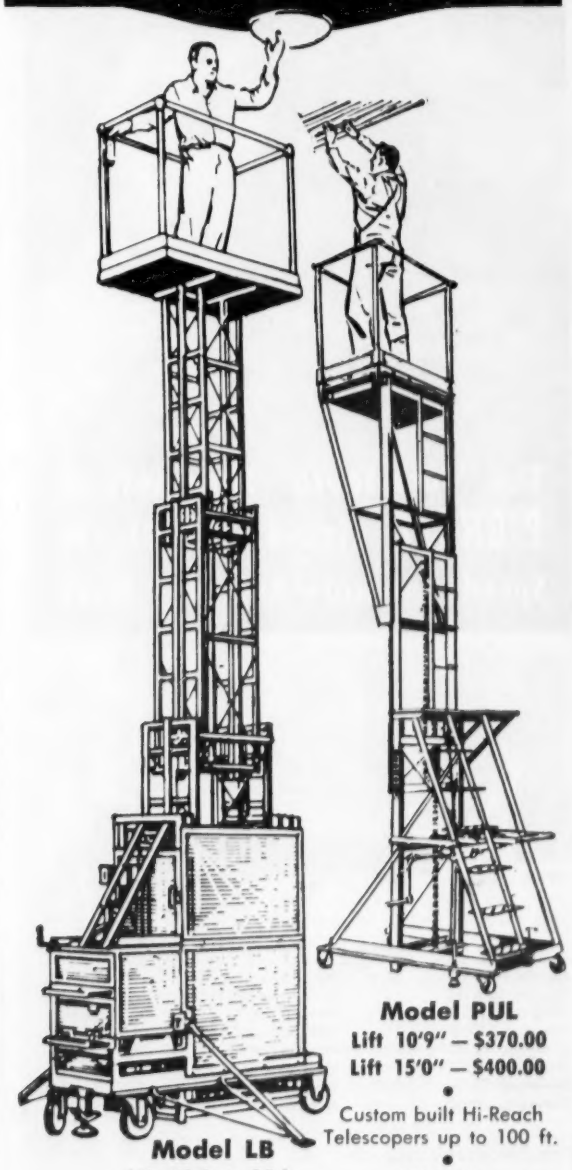
Multigrip Floor Plate has clean-edged, flat-top risers that give positive traction to feet and wheels. It's easy to clean; won't chip or crack even when traffic is heavy. United States Steel, 525 William Penn Place, Pittsburgh 30, Pennsylvania. *USS is a registered trademark*

Sold by leading distributors from coast to coast.

USS United States Steel

▲ For more details circle **NED-751 F9** on enclosed inquiry slip ▲

OVERHEAD SERVICING is Faster and Safer with HI-REACH TELESCOPERS



Model PUL
Lift 10'9" — $370.00
Lift 15'0" — $400.00

•

Custom built Hi-Reach Telescopers up to 100 ft.

•

Write for complete catalog

Model LB
Lifts 20 ft. to 35 ft.
$1510.00 up

Headquarters for standard and special built overhead servicing lifters and material handling equipment since 1901.

ECONOMY ENGINEERING
4519 W. Lake St., Chicago 24, Illinois

▲ For more details circle **NED-752 F9** on enclosed inquiry slip ▲

Write for Free Facts on....

Brainard's NEW "POWER TEAM" FOR HEAVY-DUTY STRAPPING!

• Heavy duty strapping users get more cost-cutting advantages with Brainard's new PNB stretcher and PNB2 sealer.

The PNB pneumatic stretcher permits quick tensioning—and maintains it. The PNB2 sealer, with a simple press of the thumb, gives a strong, safe, lasting seal.

Applied to 2" x .050 strap, they cut loading and packaging costs.

Write for free facts—or call your Brainard representative—he'll be there.

DIVISION OF SHARON STEEL CORPORATION • WARREN, OHIO

BRAINARD Safe-Ty **STRAPPING**

In Canada: Brainard Steel, Canadian Division, Toronto, Montreal

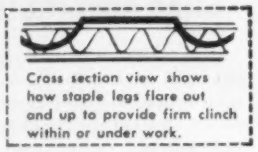
MAKERS OF TENSIONAL, HEAVY DUTY STRAPPING, SEALS, ACCESSORIES, TOOLS FOR CARLOADING AND PACKING

▲ For more details circle **NED-747 F9** on enclosed inquiry slip ▲

STAPLE CLINCHES ITSELF

no anvil needed!

DUO-FAST OUTWARD-CLINCH STAPLER



Cross section view shows how staple legs flare out and up to provide firm clinch within or under work.

A real problem solver on jobs where conventional stapler cannot be used . . . such as attaching tags to filled cartons, fastening insulation around air ducts, etc.

Special mechanism diverts staple legs outward and upward in a clinching action as shown. No anvil is needed. Easy, one-hand operation — just compress the handle and the job is done.

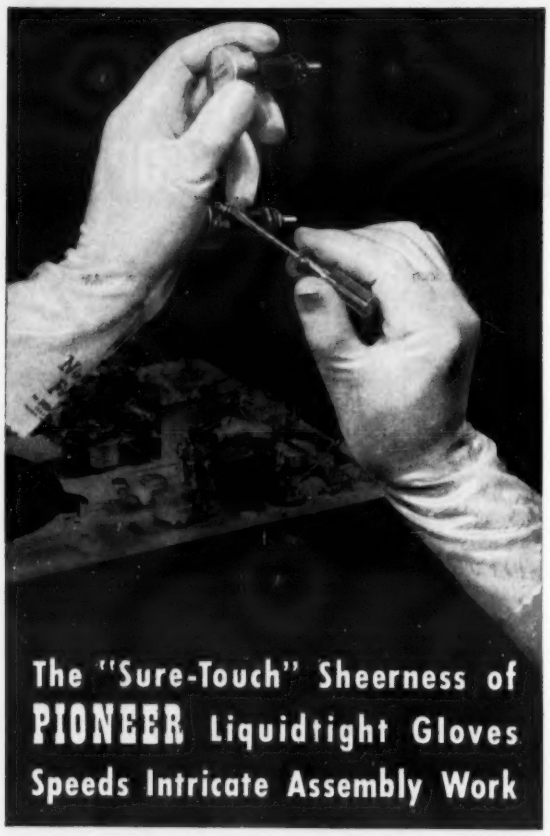
Free Service. Another quality tool in DUO-FAST's 150-model line, the Outward-Clinch Stapler above carries our famous Free Service Guarantee.

Send today for FREE Bulletin FT-8 on DUO-FAST Outward-Clinch Staplers.

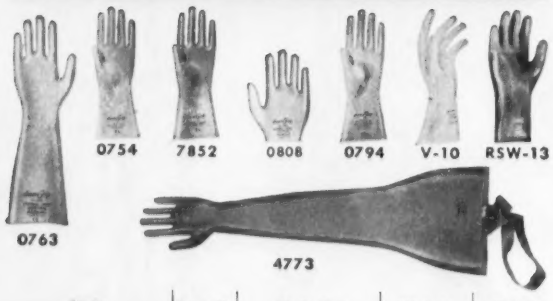
8519

DUO-FAST / FASTENER CORPORATION
3758-60 River Road • Franklin Park, Ill.

▲ For more details circle **NED-753 F9** on enclosed inquiry slip ▲



The "Sure-Touch" Sheerness of **PIONEER** Liquidtight Gloves Speeds Intricate Assembly Work



Style	Length	Material	Weight	Grip
Nimble Fingers V-10	10½"	Pylox Vinyl	Sheer	Non-Slip
Stanzoil RSW-13	10½"	Milled Neoprene	.018 (dbl)	Non-Slip
Sheergrip 0754	10½"	Natural Latex	.020 (dbl)	Smooth
Sheergrip 0794	10½"	Natural Latex	.025 (dbl)	Non-Slip
Sheergrip 0763	18"	Natural Latex	.023 (dbl)	Smooth
Sheergrip 4773	34"	Natural Latex	.035 (dbl)	Smooth
Sheergrip 7852	10½"	Neoprene Latex	.019 (dbl)	Smooth
Sheergrip 0808	7½"	Natural Latex	.020 (dbl)	Smooth

Mail This Coupon Today

The PIONEER Rubber Co.
234 Tiffin Road . . . Willard, Ohio

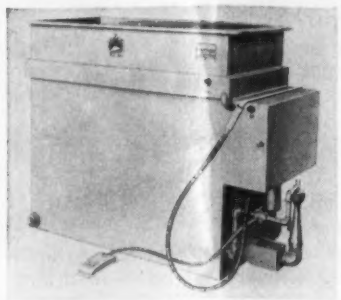
Sheer

Please send me:
- ☐ 1958-59 Pioneer Industrial Glove Catalog
- ☐ 17" x 22" Full Line Glove Wall Chart
- ☐ Job Description Form For Free Hand Protection Analysis

Firm .....
Address .....
City ..... Zone ..... State .....
Requested by .....

▲ For more details circle **NED-754 F9** on enclosed inquiry slip ▲

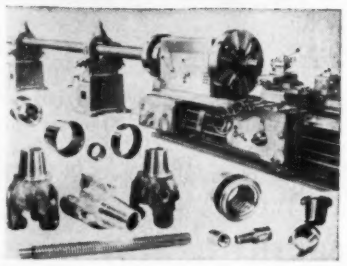
DEGREASING MACHINES
five vapor spray type units offered



Trichlorethylene vapor solution is utilized in the Baronet standard series of vapor spray degreasers to dissolve greases, oils, and waxes from all ferrous and nonferrous metals. Five models with interior lengths from 3 to 8 ft and inside depths and widths of 24 x 24 in. have a capacity of 1600 to 2000 lb per hour. Each unit is constructed of heavy gage steel with a corrosion resistant phenolic coating and galvanized work rest and encircling water jacket. Dirty solvent is automatically reclaimed. Standard equipment includes pump and water separator, foot switch, aluminum spray lance, and an Econ-O-Lid. Gas, steam, and electric heating are offered. Prices range from $500 to $1000. Made by **Baron Industries**, 241 West Ave. 26, Los Angeles 31, Calif.

▲ For more details circle **NED-755 F9** on enclosed inquiry slip ▲

AUTOMATIC THREADER
attaches to Demoor lathe saddle



Automatic cycle, straight or tapered, inside or outside threading is possible with the Hydrominic single-point threading device for Demoor lathes with spindle bores up to 12½ in. Attached to the rear of the lathe carriage saddle, it utilizes the high speeds of the machine for carbide tools. Operator sets the longitudinal stops according to length of thread to be cut, then preselects the required total infeed up to a ¼-in. cycle. Machine is then ready for automatic operation. Successive passes are made until the depth of cut is achieved. Threading attachment can be disengaged when the lathe is needed for other machining operations. Distributed by **Stokvis Multiton Corp.**, 18 Secatoag Ave., Port Washington, N. Y.

▲ For more details circle **NED-756 F9** on enclosed inquiry slip ▲

Space Filter

Mine Safety Appliances Co.—Finely-divided airborne dusts, mists, fumes, and living organisms are trapped in the Ultra-Aire space filter, subject of illustrated Bulletin 1505-5. Construction features and advantages are dealt with in the bulletin on the high capacity, replaceable units.

▲ For more details circle **NED-757 F9** on enclosed inquiry slip ▲

Replace with Colson Casters

Speed up work . . .
Eliminate breakdowns
Save floor damage

Send for new Colson catalog C101 . . . contains over 2000 job rated test proven money saving Casters.

colson

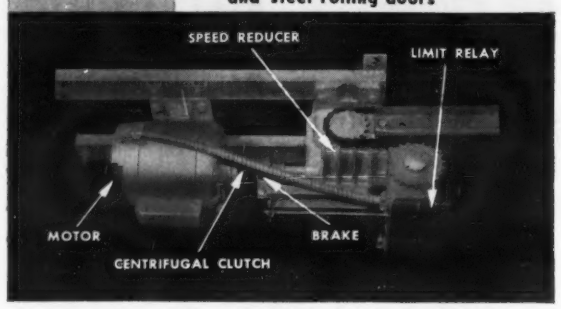
Contact your local representative or distributor or write to
The Colson Corporation
7 South Dearborn St., Chicago, Ill.
A subsidiary of
Great American Industries, Inc., Elyria, Ohio

▲ For more details circle **NED-758 F9** on enclosed inquiry slip ▲

THE MARK OF QUALITY
BARBER COLMAN

NEW Model LR
DOOR OPERATOR

- ⅓ hp motor . . . for doors 240 sq ft, 19 ft 2 in wide
- Low-voltage control standard
- For overhead, full vertical, sliding, and steel rolling doors



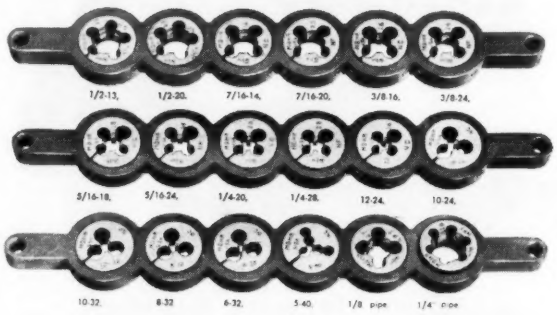
still only $230, f. o. b. Rockford — No change in the fine-quality materials and construction of famous instant-reversing Model L, yet with all the above new features, plus enclosed safety switch with Fusetron overload protection. Radio control available. Also, LC Operator with special Safety Switch. Distributor listed under "Doors" in your phone book.

WRITE for Bulletin F5685.

BARBER-COLMAN COMPANY
Dept. S-96, Rockford, Illinois

▲ For more details circle **NED-759 F9** on enclosed inquiry slip ▲

NEW TIME-SAVER TOOL



THIS NEW TOOL will save money in any shop, as it makes threading simple and quick. A precision made tool that is ready to cut 18 different size threads on any kind of lathe, on a drill press or at the vise, and it gives the shop control of these small tools.

THREE PRECISION MADE HOLDERS with 18 high grade adjustable dies, sizes shown above . . . **$39.00**
All orders sent on a 10-day approval basis.

ORDER DIRECT

WRITE for additional, FREE information on the many time and money-saving applications of this new threading tool.

MOHR TOOL & MFG. CO., Box 63-G Maywood, Ill.

▲ For more details circle **NED-760 F9** on enclosed inquiry slip ▲

MAXIMUM WORKING FORCE IN MINIMUM WORKING SPACE

Air or Hydraulic

milwaukee CYLINDERS

- Quality Construction Throughout
- Guaranteed Top Performance
- No Costly Down Time
- Precision Designed — Heavy Duty Service
- Conforms to JIC Specifications

Get all the facts and see how Milwaukee Cylinders can save space and weight . . . Save on original cost and save on maintenance.
Write today for Free Bulletins A-100 and H-100.

Standard Models Hydraulic Bore Size 1½ to 12"
Air Bore Size 1½ to 14"
Specials built to your specifications

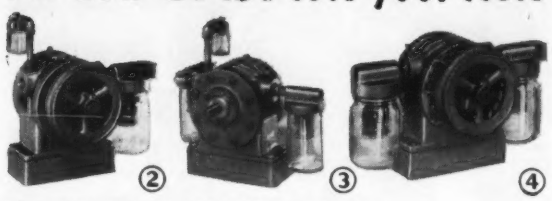
MILWAUKEE CYLINDER CO.
Division of L. & M. Machine Company
5755 SO. PENNSYLVANIA AVE., CUDAHY, WIS.

▲ For more details circle **NED-761 F9** on enclosed inquiry slip ▲

Need an original equipment

VACUUM PUMP?

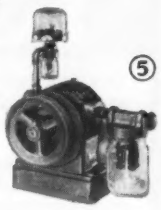
See how GAST cuts your costs



Above (1) is basic Model 1550 Vacuum Pump—(one of 13 sizes). For active customers, Gast builds this model in dozens of variations. Specific needs are met for vacuum, pressure, lubrication, drive and type of service.

For example, (2) is equipped for general purpose vacuum. (3) provides both vacuum and pressure for paper feeding. (4) oil-less model has carbon vanes; never needs oil. (5) has new constant level oiler for rigorous industrial duty.

You save because Gast *ingenuity* and *tooling and manufacturing efficiency* permit high quality at production prices.



WRITE FOR FULL DETAILS—REQUEST CATALOG

Gast Manufacturing Corp., P. O. Box 117-R, Benton Harbor, Mich.

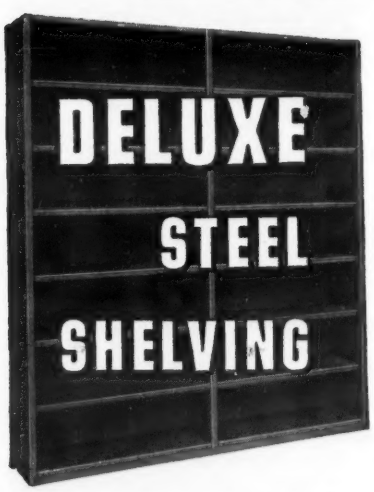
GAST ROTARY "Air may be your answer!" • AIR MOTORS TO 7 H.P. • COMPRESSORS TO 30 P.S.I. • VACUUM PUMPS TO 28 IN.

▲ For more details circle NED-762 F9 on enclosed inquiry slip ▲

faster TO ERECT

faster TO RE-ARRANGE

faster TO PAY FOR ITSELF



faster because . . . the exclusive Deluxe patented *boltless* shelf bracket replaces 90% of time-consuming nuts and bolts, providing quick installation and quick, easy shelf adjustment.

Proof of this has been demonstrated again and again at trade shows where two men erected a complete section of Deluxe Shelving in less than 5 minutes.

For any shelving storage problem, use Deluxe—the finest-designed and sturdiest shelving made. Call your local Deluxe dealer for quick, efficient layout service. Or write for the new Deluxe Shelving Catalog #30.

DELUXE METAL FURNITURE CO.
Warren 1, Pa.
A division of the Royal Metal Mfg. Co.

DELUXE

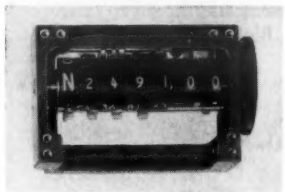
▲ For more details circle NED-763 F9 on enclosed inquiry slip ▲

HYDRAULIC COUPLER
disconnects under full pressure

Broad range of fluid mediums can be handled by the SP-500 quick-disconnect coupler. Lines can be connected or disconnected at full operating pressure with the automatic break-away feature. Both ½ and ¾-in. couplers are available with synthetic seals for use with any commercial hydraulic fluid or for pneumatic service. Special seals can be specified. Operating range is −40 to 250° F and operating pressures exceed 7500 psi. Coupler has swivel action and absorbs torsional strains and stresses. Made by **Bruning Co.**, 609 S. Ninth St., Lincoln, Nebr.

▲ For more details circle NED-764 F9 on enclosed inquiry slip ▲

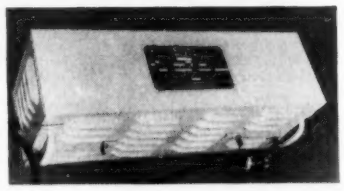
MECHANICAL COUNTER
operates at up to 1350 rpm



Series 2500 precision mechanical counter finds application in ground support equipment, telemetering, fire control, and other computers to indicate temperatures, pressures, positions, distances, and time. It operates at up to 1350 rpm, has built-in stopping points and thumb wheel for manual setting, and can be supplied for use with servo operated read-in and read-out. Units have −65 to 160° F temperature range and withstand severe vibration. They operate in both directions from zero. Made by **Chicago Dynamic Industries, Inc.**, Precision Products Div., 1725 Diversey Parkway, Chicago 14, Ill.

▲ For more details circle NED-765 F9 on enclosed inquiry slip ▲

AUTOMATIC BATTERY CHARGER
maintains industrial truck charge



Riding around on the battery itself, the silicone rectifier type Exide Power Mount automatic charger for industrial truck batteries plugs into any 115-v ac wall outlet. Transistors control a magnetic amplifier which varies the charging current as needed, tapering off the charge at the proper rate. Designed for use in one-shift operations with six-cell batteries, the charger is offered in three single-circuit models for batteries with capacities of up to 360, 450, and 660 amp-hr. Full charge requires 16 hr or less. The 22 x 6 x 9-in. unit weighs 62 lb and is housed in a protective steel case. Made by **Electric Storage Battery Co.**, Exide Industrial Div., Rising Sun & Adams Avenues, Philadelphia 20, Pa.

▲ For more details circle NED-766 F9 on enclosed inquiry slip ▲

SUTORBILT IS WELL BUILT

SUTORBILT
BLOWERS for air

- Rotary positive displacement
- No internal lubricant
- Delivers clean, dry air
- Heavy duty anti-friction roller bearings
- Wide-face herringbone gears
- Exclusive Sutorbilt Timing Hub
- Capacities up to 20,000 cfm . . . to 10 psig
- Write for bulletin on blowers and gas pumps

Representatives located in principal cities. Consult your classified telephone directory.

1166 S-13

SUTORBILT CORPORATION, 2966 EAST VICTORIA ST., COMPTON, CALIF. SUBSIDIARY OF FULLER COMPANY

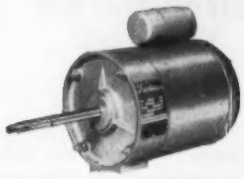
▲ For more details circle NED-767 F9 on enclosed inquiry slip ▲

SELECTING TORQUE MOTORS

• Torque motors are special from the word go. That makes Peerless one of the best sources for torque motors in ratings from 2 oz. in. to 200 lb. ft.

All standard frame sizes; all types of mountings; high torques; special paint and varnish treatments; and Class A, B and H insulation are available. Peerless engineers will work with you to produce the torque motor that powers your product best.

WEATHER-TIGHT SPECIAL FLANGE



SPECIAL FLANGE REVERSING HOIST MOTOR SINGLE PHASE

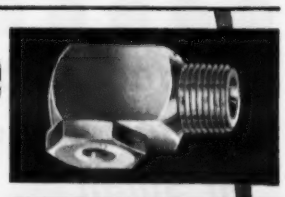
FREE—NEW TORQUE BULLETIN

This bulletin outlines basic facts about Peerless torque motors and shows applications. Write for it today.

ELECTRIC MOTOR DIVISION
THE Peerless-Electric® COMPANY
FANS · BLOWERS · MOTORS
1527 W. MARKET ST. · WARREN, OHIO

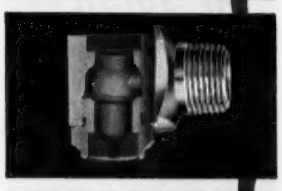
▲ For more details circle NED-768 F9 on enclosed inquiry slip ▲

Spray Nozzle types choice of over 12,000 basic designs



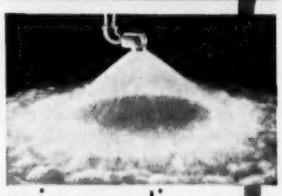
materials

brass, stainless steel, lead, hard rubber, hardened steel, tungsten carbide and many others.



performance

uniform distribution with spray angle, capacity, impact and atomization to your specifications.



to improve every spraying operation

Improve performance, lower spraying costs with Spraying Systems spray nozzles. Prompt delivery. For complete information write for Catalog 24.

SPRAYING SYSTEMS CO.
3211 RANDOLPH ST. • BELLWOOD, ILL.
ADVANCED SPRAY NOZZLE DESIGN FOR NEW DIMENSIONS IN CONTROL AND PERFORMANCE

▲ For more details circle NED-769 F9 on enclosed inquiry slip ▲

Whatever You Need in
WIRE SHAPES and FORMS
...ask SOMMER!

Ask Sommer first for whatever you need in precision wire parts or products. We have complete equipment to handle your job from start to finish.

We offer finest facilities for automatic fabrication, flattening and punching, threading, spot and butt welding.

Finishes include baked enamel, cadmium, brite zinc, brite nickel, nickel chrome and mill finishes—in both barrel and fully automatic equipment.

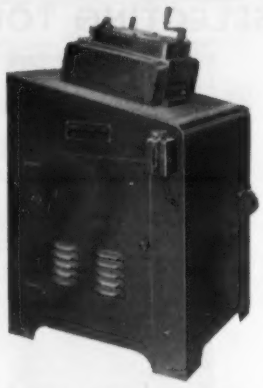
We make our own tools, saving time and money for you.

Tell us your needs. Send sample, blueprint or drawing. We will submit recommendations and quotations promptly.

SOMMER
METALCRAFT CORPORATION
200 POSTON DRIVE
CRAWFORDSVILLE, INDIANA

▲ For more details circle NED-770 F9 on enclosed inquiry slip ▲

small parts straighteners



Flat, accurate stampings save hours of assembly time, work better and last longer where flatness is important to performance, paint and plate easier and look better.

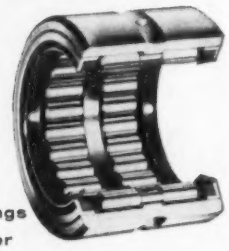
Low cost Cooper Weymouth straighteners are fast, accurate, automatic, straighten small parts, coils or strips to .001" - .002". A unique two-point adjustment gives fast, easy, precise set-up. Machined steel housings, hardened and ground rollers and anti-friction bearings insure longest life. A 4 gear-train drive equalizes bearing loads, gives smoother high-speed operation. Self-contained and self-powered with variable speed controls, straighteners are available in bench-height cabinet or portable models, in four sizes.

Also inquire about other Cooper Weymouth cost-saving automatic press room accessory equipment.

COOPER WEYMOUTH, INC.
604 Honeyspot Road, Stratford, Conn.

▲ For more details circle NED-771 F9 on enclosed inquiry slip ▲

Protected bearing performance in small radial space



McGILL sealed GUIDEROL® bearings are famous for long life under heavy loads

GUIDEROL design combines the inherent high load capacity of a full-complement of race-width rollers with the advantage of center guided rollers that limit skewing and prevent binding under misalignment. Integral seals keep contamination out and lubrication in. This packs a bonus of service life into GUIDEROL bearings and eliminates the need for frequent relubrication.

For limited space, high load, precision bearing requirements, specify McGILL SG series Sealed GUIDEROL bearings.

Write for helpful Bearing Handbook No. H-54-B

engineered electrical products McGILL® precision needle roller bearings

McGILL MFG. CO., Bearing Div., 101 N. LAFAYETTE ST., VALPARAISO, IND.

▲ For more details circle NED-772 F9 on enclosed inquiry slip ▲

Easier way to fasten your assemblies

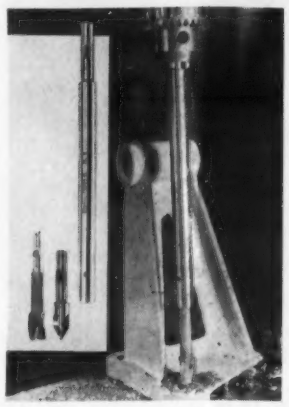
Just drill and drive SEL-LOK spring pins

Drill an ordinary tolerance hole. Drive in a SEL-LOK. Spring action locks it tightly in place. Use SEL-LOK spring pins as keys, axles, cotter pins, hinge pins, stop pins or pivots . . . in metal assemblies or in products of nylon, Bakelite, hard rubber or fiber. They eliminate costly tapping, reaming, peening and milling operations, as well as the rejects associated with close tolerances. They simplify design, save assembly time. And they are reusable. Stocked in carbon and corrosion-resistant steel and in beryllium copper. See your authorized SPS distributor or write us for Bulletin 2331 and samples.

INDUSTRIAL FASTENER Division SPS
JENKINTOWN 24, PENNSYLVANIA

▲ For more details circle NED-773 F9 on enclosed inquiry slip ▲

COUNTERBORES & COUNTERSINKS used with standard extensions

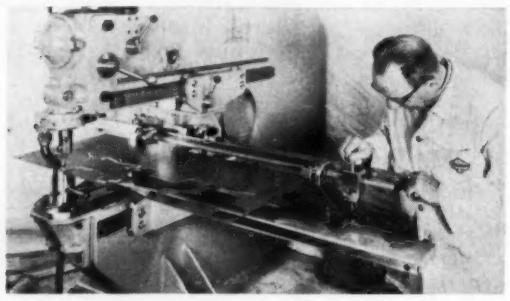


Line of solid high speed steel counterbores with interchangeable pilots and solid countersinks is designed for use alone or with one or more extensions when extra length is needed. Extensions have lapped holes and are ground for minimum run-out. Solid pilots in counterbores are changed without removing or disturbing the extensions. All tools have shanks ground to a tolerance of 0.0003 in. Line of aircraft counterbores with 1/4-in. shanks and extensions is available for use in portable tools. Counterbore sizes range from 1/4 to 1 in. by 1/64-in. increments, and countersinks range from 3/8 to 1 in. by 1/16-in. increments with seven standard included angles. Made by **Bicknell-Thomas Co.**, Box 431, Greenfield, Mass.

▲ For more details circle NED-774 F9 on enclosed inquiry slip ▲

COPY NIBBLING MACHINE reproduces blanks from template by guiding tracer along contours

Blanks or cut-outs of any shape are reproduced directly from a master or template by the Trumpf copy nibbling machine. It will also perform shearing, bead-



ing, folding, flanging, peening, and slotting operations. It is rigidly clamped to roller bearing-guided coordinates which permit it to be moved easily in any horizontal direction by guiding a tracer pin along the template contours. The all-side cutting punch will pierce its own starting hole.

Rectangular cut-outs require no master, but are positioned by built-in rulers. Circular cuts with 3/8 to 24-in. diameters are produced by clamping the guiding pin into a revolving, adjustable ruler. Machine is available with 41, 49, and 59-in. throat depths. Cutting capacity is up to 9-gage 70,000-psi tensile steel. Available from **Cosa Corp.**, 405 Lexington Ave., New York 17, N. Y.

▲ For more details circle NED-775 F9 on enclosed inquiry slip ▲

Quicker, Easier, Less Costly

STENCILING with REYNOLDS SPRAY STENCIL INKS

quick drying—waterproof

9 Colors—Each packaged in the handy easy-to-use 12 oz. Aerosol Container

Stenciling, color coding and identification marking have now become clean, quick and easy. Container sprays a dense, compact cone of specially formulated ink at the touch of a finger. Ink is very opaque. Dries in seconds. No smear, smudge or curtaining. Not to be confused with slow drying paints, lacquers and enamels. Easy to store. Always ready to use. No cans to open; no pots or brushes to load. No drying out, no waste, no mess. Saves time. Specify Reynolds,—the original, proven best ink **for any marking.** A trial will convince you!

GET FULL DETAILS! Write Today for Fully Descriptive Bulletin No. 58.

REYNOLDS INK, INC.
4504 EUCLID AVE.
CLEVELAND 3, OHIO

▲ For more details circle NED-776 F9 on enclosed inquiry slip ▲

COMBINATION SAWS can now be filed automatically

with the New MODEL 200

FOLEY Automatic SAW FILER

Also CROSSCUT CIRCULAR SAWS, BAND SAWS, HAND SAWS

This is the FIRST and ONLY machine which will file the so-called "combination" (rip and crosscut) circular saws; also crosscut circular saws, band saws, all types of hand saws.

The exclusive Foley principle of jointing the saw as it is filed, keeps teeth uniform in size, shape and spacing; keeps circular saws perfectly round, usually doubles saw life

30-Day Trial Offer. You may try the new Model 200 Foley Saw Filer in your own shop for 30 days. Write for literature and details of 30-day trial offer.

FOLEY MFG. CO. 3323 N.E. 5TH STREET MINNEAPOLIS 18, MINN.

▲ For more details circle NED-777 F9 on enclosed inquiry slip ▲

This "heart failure" Can lengthen someone's life!

Pictured above is what happens when a pressure vessel protected by a BS&B Safety Head develops pressures above safe limits. "Heart" of the Safety Head is the rupture disc, which bursts to relieve the overpressure instantly and completely—guarding against injuries to personnel and damage to plant equipment.

BS&B Safety Heads protect pressure systems in every type industry

Thousands of BS&B Safety Heads are today protecting millions of dollars worth of property and equipment and countless human lives. There's a BS&B Safety Head suitable for many types of pressure systems containing air, gas, steam or liquid.

BS&B Rupture Disc— "Heart" of the Safety Head

BS&B rupture discs are designed to relieve pressures at any specified point from 3 to 100,000 pounds per square inch. They are available in standard sizes ranging from 1/4-inch to 36 inches in diameter, and in special sizes and types for virtually any application.

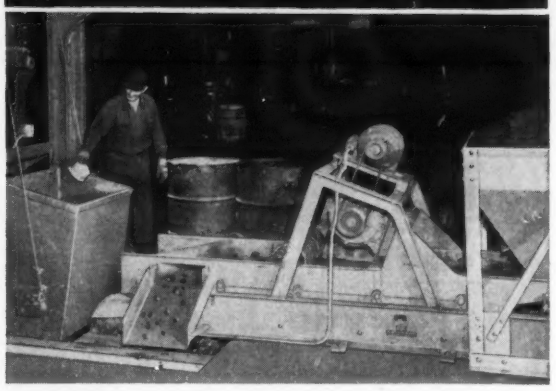
If you use any type of pressured system, let us tell you more about BS&B Safety Heads and rupture discs. Call or write your nearest BS&B office or representative—or write to .

The "CIRCUIT BREAKER" of Pressured Systems

BLACK, SIVALLS & BRYSON, INC.
Safety Head Division
Dept. 2-GD6
7500 East 12th St.
Kansas City 26, Mo.

▲ For more details circle NED-778 F9 on enclosed inquiry slip ▲

how AJAX LO-VEYORS do more than simply convey...



Application of vibration to bulk materials and products transforms dead weight into live weight. In addition to conveying, you can...

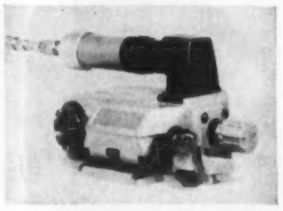
Feed, Sort, Separate, Align, Wash, Cool, De-Water, Remove Foreign Matter, Salvage Reusable Material, and perform many other operations.

Processing costs, as well as handling costs go down. AJAX VIBRATION ENGINEERING SERVICE offers years of experience in putting vibration to work. Phone or write for latest Ajax Selection Guide No. 66 and learn how you can do two or more jobs for the price of one Ajax Lo-Veyor.

AJAX FLEXIBLE COUPLING CO. INC.
142 Portage Road, Westfield, N. Y.

For more details circle NED-779 F9 on enclosed inquiry slip

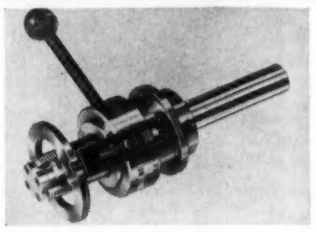
STRAPPING MACHINE
tightens, ties, cuts round strap



Portable, air driven Model 13 strapping machine tensions, ties, and cuts round steel strapping in one operation for virtually any size or shape of package. It weighs only 20 lb and measures 11 x 7 x 6¼ in. Tool can be held by the operator or suspended from a counterbalancing mechanism. Round strapping, available in a range of gages and tensile strengths, is used directly from a coil. Uniform, adjustable strap tension is automatically applied, regardless of package size or number of straps used. Offered by **United States Steel Corp.**, U. S. Steel Supply Div., 208 S. LaSalle St., Chicago 90, Ill.

For more details circle NED-782 F9 on enclosed inquiry slip

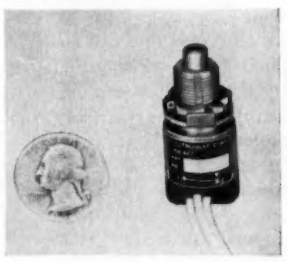
COLLAPSING TAPS
for threading tough materials



Semitaper mechanism of Class ST collapsing taps permits them to recede during the tripping action, minimizing the cutting stress as the full threads are being formed. Stop-off lines are eliminated. Taps produce smooth NPT or NPTF threads on tough materials. Adjusting screws in the trip bars prevent any movement of the bars during tapping. The ST taps are offered in the same sizes as Class S taps and use standard Class S chasers. Made by **Geometric-Horton**, 3 Valley St., New Haven 15, Conn.

For more details circle NED-783 F9 on enclosed inquiry slip

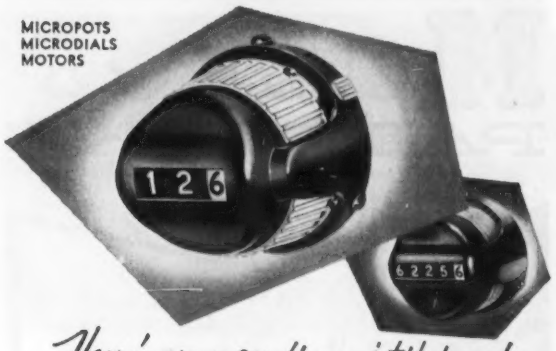
SMALL PUSHBUTTON SWITCH
rated 6 amp at 125 v ac



Having the same general configuration as sealed switches that conform to MS-25331, this miniaturized, environment-free pushbutton switch has a ¾-in. diameter and 1½-in. height. O-ring in stem and potting around the leads seals out dirt, moisture, and oil. Scraper built into the stem prevents ice and dirt from fouling the plunger. Switch is rated 6 amp at 125 v ac or 30 v dc resistive, and 2.5 amp at 30 v dc inductive. It has single-pole double-throw contacts. Corrosion-resistant construction allows its use on aircraft and missiles, as well as machine tools. Made by **Electrosnap Corp.**, 4220 W. Lake St., Chicago 24, Ill.

For more details circle NED-784 F9 on enclosed inquiry slip

MICROPOTS
MICRODIALS
MOTORS



There's your reading... jot it down!

BORG DIRECT-READING MICRODIALS

Borg Microdials are the easiest-to-read dials ever developed! Inline digital presentation makes it so. Glance at the dial . . . there's your reading . . . jot it down. Available in 3-digit 10-turn models, 4-digit 100-turn models and 5-digit 1000-turn models. Also available . . . Borg Concentric Scale Microdials. Write for complete engineering data.

ASK FOR CATALOG BED-A90

BORG EQUIPMENT DIVISION
AMPHENOL-BORG ELECTRONICS CORPORATION
JANESVILLE, WISCONSIN

For more details circle NED-785 F9 on enclosed inquiry slip

HOW TO ENGINEER SPECIFY ORDER PRICE...

HYDRAULIC CYLINDERS

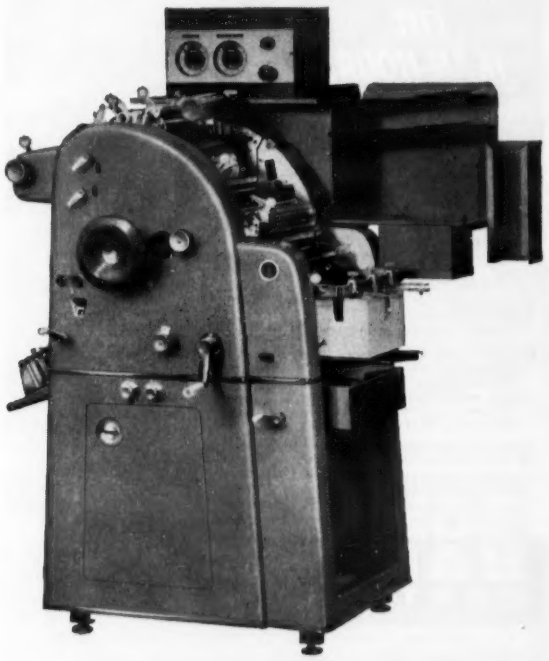
Here is complete engineering data on Hannifin's newest line of hydraulic cylinders. Every mounting style is fully dimensioned in all sizes. Standard models or special modifications are made easy to specify. The price sheet, too, is easy to understand, easy to use.

Write for Bulletin 113-B.

HANNIFIN
Hannifin Company, 527 South Wolf Road, Des Plaines, Ill.
(Hannifin Company is a division of Parker-Hannifin Corporation)

For more details circle NED-780 F9 on enclosed inquiry slip

NEW, completely automated A. B. DICK offset systems duplicator...



Reduces manual operations from 7 to 2!

1. **OPERATOR SIMPLY ATTACHES MASTER, TURNS ON SWITCH...**
2. **PROGRAM CONTROL UNIT...**
   - Starts cycle
   - Images blanket
   - Starts feed
   - Counts copies
   - Stops feed
   - Washes blanket
   - Shuts off machine

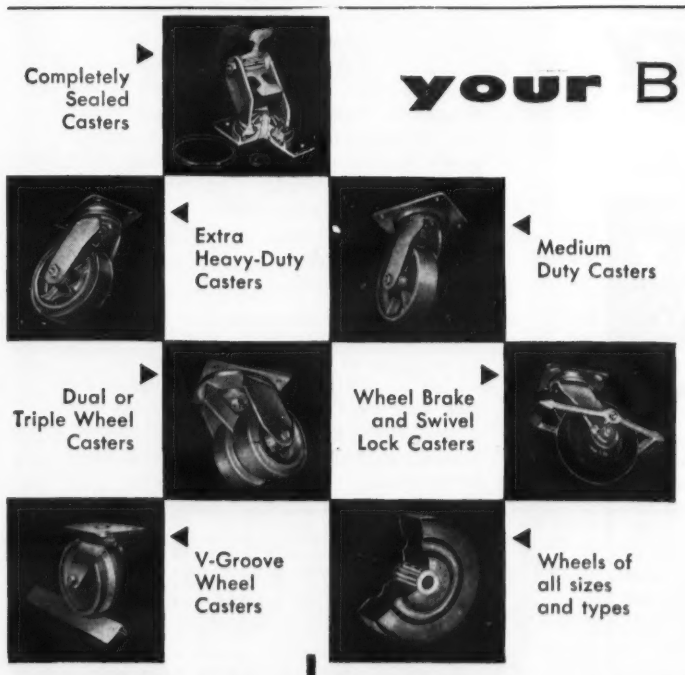
Handles up to 4 complete systems jobs per minute...

order-invoice, purchase-order receiving, production control, engineering paperwork. Models for duplicating image areas from 3 x 5 to 10½ x 16½ inches. Write for complete information. A. B. Dick Company, 5700 West Touhy Ave., Chicago 48, Illinois.

A·B·DICK®
Achievement through innovation

For more details circle NED-786 F9 on enclosed inquiry slip

your BEST move!



ALBION *industrial...* CASTERS

Albion casters checkmate your materials handling problems. They are versatile, dependable, economical and available *right now*. Whether you need a caster for light, medium, heavy or extra heavy duty requirements—standard or special—Albion casters are the practical answer.

Albion casters are available in every conceivable range of Industrial size, type, capacity and desired wheel type to suit your needs.

Make the *best* move...get all the facts on Albion Casters today. Write, wire or phone for the information you need. Albion is always at your service.

Do it now... request your copy of the Albion Caster and Wheel catalog. Yours for the asking.

ALBION INDUSTRIES, INC.
Distributors in Every Strategic City
Main Plant: ALBION, MICHIGAN

For more details circle NED-781 F9 on enclosed inquiry slip

Master PADLOCKS

for INDUSTRIAL Protection

FAMOUS MASTER Laminated Padlocks

Multiple steel plates . . . stronger than a solid block! Genuine brass-cylinder, pin-tumbler security. No finer padlock protection.

STAINLESS STEEL Combination Padlocks

Double-wall construction . . . 3 number brass locking mechanism. Available with "Key-Control" — one control key opens all locks.

FREE BROCHURE

Condensed, easy to use information on the Master padlocks most widely used for industrial applications. Write today.

Master Lock Company, Milwaukee 45, Wis.

World's Largest Padlock Manufacturers

▲ For more details circle **NED-787 F9** on enclosed inquiry slip ▲

EVERY TIME YOU MOVE A MACHINE

Barry Machine Mounts *CUT MAN-HOURS 90%*

In new installations — In relocating machinery — you get savings like these!

3 man-hours instead of 42 man-hours to move machines at Johnson & Johnson

60% saving in new machine installation cost at American Type Founders

No lost production time in moving a complete machine shop at Wyman-Gordon

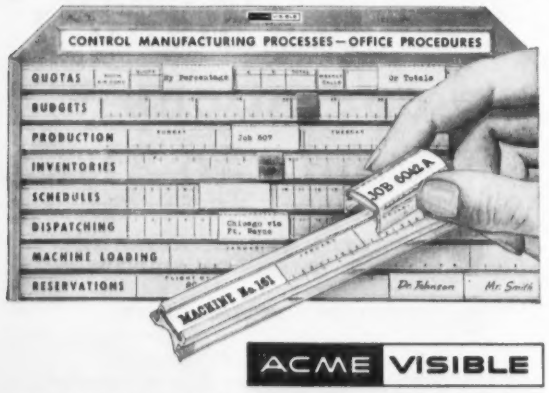
Barry Leveling Machinery Mounts let you move machines wherever they are needed, and have them in full production in **minutes** — with no delays for drilling, lagging, or shimming.

Write now for the Field Reports that prove these savings — that **you** can get with Barry Machinery Mounts.

BARRY CONTROLS INCORPORATED — BARRY B MOUNT — SOLD THROUGH INDUSTRIAL DISTRIBUTORS

752 PLEASANT STREET, WATERTOWN 72, MASSACHUSETTS

▲ For more details circle **NED-788 F9** on enclosed inquiry slip ▲



ACME VISIBLE

VISUAL CONTROL PANELS

Chart Action, Indicate Trends, Permit Comparison, Organize Facts

Complete flexibility, limitless signalling and charting possibilities. Easily adapted to your individual record requirements.

Lightweight panels contain clear plastic tubes which are individually removable and may be shifted from one position to another . . . Clarity of tube provides full legibility of contents.

ACME VISIBLE RECORDS, INC., Crozet, Virginia

V-659

☐ Send us more information on Visual Control Panels.

☐ We are interested in Acme Visible equipment for_____ records.
KIND OF RECORD

Company_____
Attention_____
Address_____
City_____ Zone____ State_____

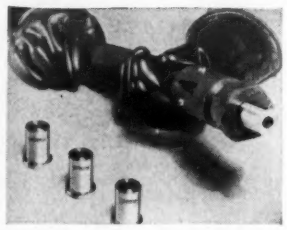
▲ For more details circle **NED-789 F9** on enclosed inquiry slip ▲

REPRODUCTION MACHINE
makes tracings up to 42 in. wide

Engineering and other types of prints are quickly produced by the Model 42 low cost, desk type, diazotype reproduction machine. Sharp, positive black-and-white prints are made on Copyflex paper in widths up to 42 in. and any length. The odorless developer, available in a ready to use spray applicator, is free of noxious fumes. Speed range is 3 to 36 ipm. Made by **Charles Bruning Co.,** 1800 W. Central Rd., Mt. Prospect, Ill.

▲ For more details circle **NED-790 F9** on enclosed inquiry slip ▲

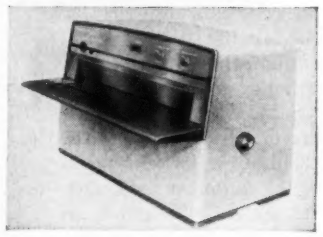
BLASTING NOZZLE
liner is tungsten carbide



Shot, grit, and sand blast cleaning is speeded with savings of compressed air by using the Uniflo nozzle which retains its original orifice size to keep the blast concentrated. Contributing to its long life is the tungsten carbide nozzle liner. Jacket is Kirksite, a shock resisting alloy of zinc, aluminum, copper, and magnesium. Nozzle for hand blasting, cabinet, and barrel use is offered in 3/16, 1/4, 5/16, 3/8, 7/16, 1/2, and 3/4-in. orifice sizes. Made by **W. W. Sly Mfg. Co.,** 4700 Train Ave., Cleveland 2, Ohio.

▲ For more details circle **NED-791 F9** on enclosed inquiry slip ▲

DOCUMENT LAMINATOR
protects drawings, photos, papers



Material up to 17 in. wide by any length up to the 2000-ft roll capacity can be handled by the GBC Automatic Laminator. It encases paper, card, board, or cover stock in a clear, tough plastic film in only 3 sec. Valuable papers, drawings, photographs, layouts, and other items sealed in the thin, pliable plastic are tamperproof; impervious to dirt, grease, and acids; stainproof; and immune to wear and tear. Occupying no more space than a typewriter, the laminator applies perfect laminations, even on rough or torn surfaces. Three thermostats assure equal distribution of heat. Made by **General Binding Corp.,** 1101 Skokie Highway, Northbrook, Ill.

▲ For more details circle **NED-792 F9** on enclosed inquiry slip ▲

SAVE WITH SAFETY

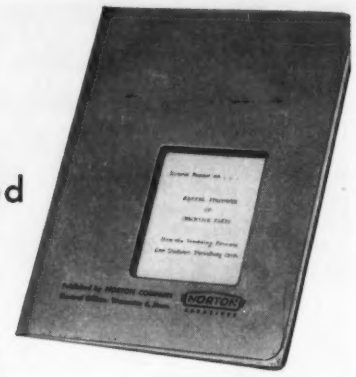
BIL-JAX ROLLING SCAFFOLDS

Use standard scaffold parts for lots of combinations . . . to go up high for ceilings . . . straight out for long, low platform . . . for inside or outdoors work. Safe, easy to set-up and take down . . . speeds the job. Rental and sales outlets in principal cities.

GETS YOU UP IN THE WORLD — BIL-JAX INC., Archbold, Ohio

▲ For more details circle **NED-793 F9** on enclosed inquiry slip ▲

If you finish machined parts **this report is for you**



BARREL FINISHING MACHINED PARTS, written by Norton Engineers, is a report based on the revolutionary advantages of barrel finishing over hand finishing. It describes how tumbling improves the finish and cuts the production costs of all types of machined parts — and tells why Norton TUMBLEX* abrasives are ideal for these applications. Get this report from your Norton Representative. And send sample work parts to our Sample Processing Department — for better, lower cost finishing and prompt return to you with detailed information. NORTON COMPANY, Worcester 6, Mass.

G-365

NORTON ABRASIVES

*Trade-Mark Reg. U.S. Pat. Off. and Foreign Countries

Making better products...to make your products better

▲ For more details circle **NED-794 F9** on enclosed inquiry slip ▲

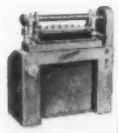
New cam-lever linkage of the Di-Acro Model 36 shear provides a greater mechanical advantage than lever actions. This makes it easier to control both machine and material so that operation is easier, faster and safer.

Quick-Set micrometer gauges set to hair-line accuracy in seconds. The new Model 36 shear is fast to set-up, fast to operate. To maintain tolerances to thousandths of an inch, an automatic hold down bar grips materials during shearing. Notching and slitting can be done easily by setting the adjustable ram stops to limit stroke length. Capacity of the machine is 16 gauge steel.

Steel, rubber, mesh and all shearable sheet materials (even some plastics) can be cut to die-accuracy with the new Model 36.

Similar performance is also delivered by a range of other models down to 6 inches in width. For detailed information, call your Di-Acro distributor who is listed in the yellow pages of your phone book under Machinery—Machine Tools, or write us.

DI-ACRO POWER SHEARS



Di-Acro Shears of 12" and 24" widths are available in power models. The standard model provides continuous and single stroke operation. Vari-O-Speed model shears automatically at a range of speed from 30 to 200 R.P.M. or single stroke.

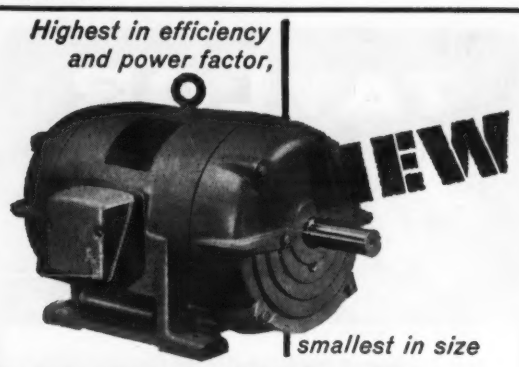
Find us fast in the Yellow Pages

O'NEIL-IRWIN MFG. CO.
354 8th Ave. • Lake City, Minn.

di-acro PRECISION METALWORKING MACHINES

pronounced "die-ack-ro"

▲ For more details circle **NED-795 F9** on enclosed inquiry slip ▲



SYNCRO-SPEDE

The Louis Allis synchronous induction motor

The new Louis Allis "Syncro-Spede" synchronous induction motor delivers constant speed throughout its *entire* load range. Ideally suited for multiple-motor systems where several motors must operate in exact synchronism.

New design is really compact—"Syncro-Spede" actually comes in same frame size as induction motor of comparable hp! High efficiency and power factor provide operating economy. Available in sizes up to 100 hp. For facts, write The Louis Allis Co., 436 East Stewart Street, Milwaukee 1, Wisconsin.

LOUIS ALLIS

For more details circle NED-796 F9 on enclosed inquiry slip

Sutton NEW IMPROVED MOTOR DRIVEN PRESSURE BLOWER

ONE-PIECE HOUSING
SELF-CLEANING WHEEL

For EXHAUSTING Dust . . Smoke Fumes . . Vapor
COOLING
DRYING
CONVEYING Cotton . . Wool Shavings
FORGE BLASTING

3 SIZES ¼, ½, 1 H. P.

STRONG . . LIGHT CAST ALUMINUM

Even, non-pulsating air flow . . 100-800 cu. ft. per min. at ½" to 6" static pressure. Straight wall construction cuts windage . . ups efficiency. 3450 r.p.m. direct connected 60-cycle motor . . open or totally enclosed. Set discharge in 8 different positions.

WRITE FOR DESCRIPTIVE LITERATURE

Sutton Manufacturing Corp.
112 W. WILSON AVENUE
NORFOLK, VIRGINIA

For more details circle NED-797 F9 on enclosed inquiry slip

LOW COST HAND PUMPS

for safe, fast dispensing of INDUSTRIAL LIQUIDS

20 g.p.m. TRANSFER LUBE AND CUTTING OILS, SOLVENTS, FUELS AND PROCESS LIQUIDS WITHOUT WASTE

Double-action, 20 g.p.m., corrosion-resistant pump available in models for most plant needs. Complete catalog and prices available by return mail. Quick delivery from many warehousing points.

WRITE for CATALOG

ROTARY TYPE AVAILABLE IN MODELS USED AS
- BARREL PUMP
- HOSE REFUELER
- SKID TANK PUMP
- PIPESTAND UNIT
- PIPELINE MOUNT

10 g.p.m.

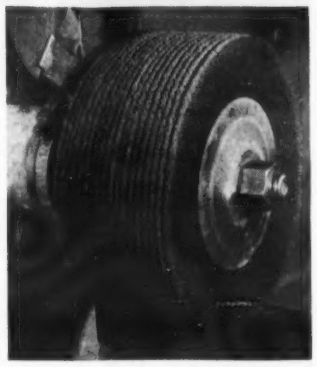
BOWSER, INC. FORT WAYNE INDIANA

1381 E. CREIGHTON • FORT WAYNE, IND.

For more details circle NED-798 F9 on enclosed inquiry slip

New Processes and Materials

METAL FINISHING MATERIAL
¼-in. thick discs can be ganged



Nylon web impregnated with fine grades of abrasive mineral comprise Scotch-Brite finishing material for stainless steel, aluminum, zinc, brass, copper, titanium, and other nonferrous metals. Not intended for stock removal, it produces a unique and uniform finish on fabricated metals at low cost. Use prior to and during pickling operations has been found to minimize pickling time and produce clean steel. Material is supplied in ¼-in. thick discs which can be ganged on a common spindle to any width. It can be used with automatic, semiautomatic, hand-held, and hand operations. It is light enough for use with portable tools. Very fine, fine, medium, and coarse grades are offered in 6, 8, 10, 12, and 14-in. discs. Made by **Minnesota Mining & Mfg. Co.**, Dept. F9-184, 900 Bush Ave., St. Paul 6, Minn.

For more details circle NED-799 F9 on enclosed inquiry slip

FLOOR PATCH
resists acids, alkalies, and oils

An extremely strong, long-wearing surface that protects against acids, alkalies, and oils in indoor or outdoor service is provided by P-D-Q Floor, a quick-drying floor patch. It bonds securely to concrete, brick, stone, wood, steel, and other materials. Easily applied, it dries for light traffic in 4 to 6 hr and will withstand heavy trucking after drying overnight. It can be given a permanent nonslip surface and is supplied in ready-to-mix 50-lb units. Made by **Maintenance Engineering Co.**, 16 W. Johnson St., Philadelphia 44, Pa.

For more details circle NED-800 F9 on enclosed inquiry slip

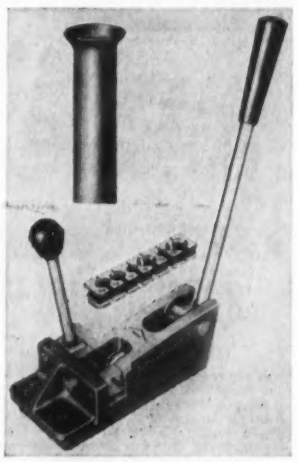
IMPERIAL Engineering and Data Digest

ENGINEERED TUBE FITTINGS • VALVES • TUBING TOOLS

New IMPERIAL Production Flaring Tool makes flares in less than 4 seconds

- Portable! Use it anywhere there is a bench or vise support.
- Flares six different sizes of soft copper, aluminum or brass tubing — 3/16", 1/4", 5/16", 3/8", 1/2", 5/8", O.D.
- 4-second cam-lever operation. One lever closes flaring die, another lever makes flare.
- Makes smooth, even radius at flare base. Self-gauging for accuracy. Quickly changed from one tube size to another.
- No. 555-F — Production Flaring Tool with cone for 45° flares. No. 557-F — Production Flaring Tool with cone for 37° flares.

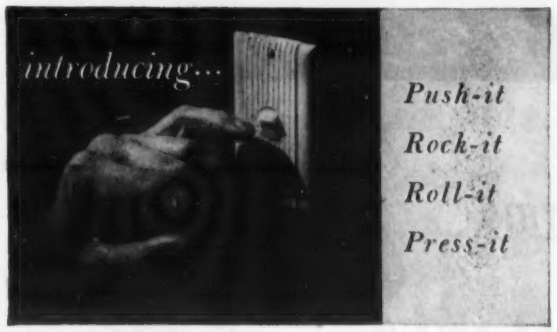
Write for Bulletin 3105.



IMPERIAL

THE IMPERIAL BRASS MFG. CO.
Dept. NED-69
6300 W. Howard St., Chicago 48, Ill.
In Canada: 18 Hook Ave., Toronto, Ont.

For more details circle NED-801 F9 on enclosed inquiry slip



THE ALL-NEW P&S ROCKER-GLO SWITCH

. . . the switch that *looks right, feels right* and *is* right for every type of wiring job.

Here is the one switch with the most wanted features on the market today.

The merest touch causes instant, silent action . . . and Rocker-Glo glows in the dark.

Available in Despard and narrow rocker types.

Write for brochure. Dept. NED-659

PASS & SEYMOUR, INC.
SYRACUSE 9, NEW YORK
60 E. 42nd St., New York 17, N. Y. 1440 N. Pulaski Rd., Chicago 51, Ill.
In Canada: Renfrew Electric Limited, Renfrew, Ontario

For more details circle NED-802 F9 on enclosed inquiry slip

MRC 7000-P SERIES

heavy-duty, angular-contact

BALL BEARINGS

Send for FORM 1548 listing sizes and capacity

MARLIN-ROCKWELL CORPORATION
Jamestown, N.Y.

MRC BALL AND ROLLER *bearings*

For more details circle NED-803 F9 on enclosed inquiry slip

CUT HANDLING COSTS with HYTROL Conveyors

All-purpose Model "A" with aluminum bed, reversible, adjustable tension. 8 sizes, 6 to 20' length.

- RUGGED
- COMPACT
- VERSATILE
- JOB-ENGINEERED

- Horizontal and Inclined Models
- All-aluminum and All-steel Models
- Portable and Folding Models, Built-in Models
- Table-Top Models for Assembly Operations
- Powered, Reversible, Hydraulic Elevating
- Complete Optional Equipment and Attachments

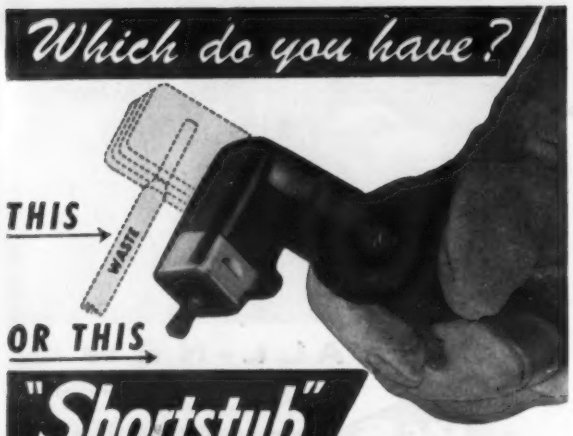
Let us help you choose the conveyor or conveying system that fits your needs. Engineering assistance at no obligation. Write for catalog.

HYTROL Conveyor Co.

1965 S. 54th STREET • MILWAUKEE 14, WIS.

For more details circle NED-804 F9 on enclosed inquiry slip

Which do you have?



"Shortstub" ELECTRODE HOLDERS

Convert the total fluxed portion of every electrode into weld metal — REDUCE STUB WASTE TO A MINIMUM

SPECIFICATION

TWO SIZES FILL ALL NEEDS See your local welding Distributor or write for further information	Model No.	Cap. Amps.	List Price
	4	400	7.70
	6	600	8.80

Quantity prices save you 10 to 20%

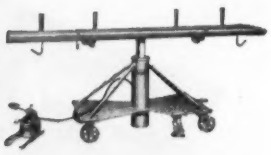
Mfd. & Prd. By
BERNARD WELDING & EQUIPMENT CO.
Pioneer for Modern Welding
10232 AVENUE N, CHICAGO 17, ILL.

▲ For more details circle NED-806 F9 on enclosed inquiry slip ▲

RAYMOND COST CUTTERS

Portable HYDRAULIC elevating table

For die handling, feeding, positioning. Telescopic and non-telescopic models. Cap. 2,000 lbs.



HYDRAULIC sheet feeding table

Keeps sheets, strips at right working level. Increases production, makes jobs safer, easier. Cap. 2,000 lbs.

RAYMOND

Lightweight HYDRAULIC pallet truck

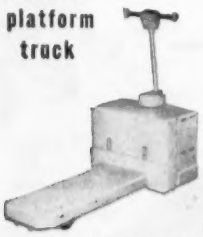
Rugged, maneuverable. 270° turning radius. Separate lift and lower foot pedals. Cap. 2,000 and 3,000 lbs.

Walkie pallet truck

24 volt power. Three speeds forward or reverse. Low price includes batteries and charger. Cap. 4,000 lbs.

RAYMOND

Walkie platform truck



Operates in narrow aisles and crowded production areas. 24 volts. Low price includes batteries and charger. Cap. 4,000 lbs.

Walkie pallet stacker

Tiers 2,000 lb. pallet loads 10 ft. high from 6½ ft. aisles. 24 volts. Low price includes batteries and charger.

The RAYMOND CORPORATION

SEND FOR FREE BULLETINS

4189 Madison St., Greene, N. Y.
Please send bulletins:

☐ Portable Elevating Table ☐ Walkie Pallet Truck
☐ Sheet Feeding Table ☐ Walkie Pallet Stacker
☐ Lightweight Pallet Truck ☐ Walkie Platform Truck

NAME TITLE
COMPANY
STREET
CITY STATE

▲ For more details circle NED-807 F9 on enclosed inquiry slip ▲

New Literature and Catalogs

Lightweight Pipe

Naylor Pipe Co.—Guidance for the selection and application of 4 to 30-in. diameter lightweight pipe and fittings is provided by 8-page Bulletin 59. Specifications are given for Lockseam Spiralweld pipe, one-piece Wedgelock couplings and other connectors; standard fittings; and welding flanges. All information is condensed and arranged for easy use.

▲ For more details circle NED-808 F9 on enclosed inquiry slip ▲

Incline Belt Conveyors

Sage Equipment Co.—Incline-O-Belt floor-to-floor belt conveyors range from 5 to 60 ft in length and have belt widths of 6 to 48 in. Details of various models, including those with gravity wheel or power head sections and tail feeders, are contained in 12-page portfolio. Belt handles cargo on inclines up to 30 degrees and at speeds to 50 fpm.

▲ For more details circle NED-809 F9 on enclosed inquiry slip ▲

Wheels for Industrial Use

Disogrin Industries, Inc.—Presented in 4-page bulletin "Disowheel Standard Wheels" are specifications on 4 to 28-in. diameter industrial wheels which feature polyurethane tires. These plastic tires withstand all hazards encountered in industrial service. Load capacities are tabulated.

▲ For more details circle NED-810 F9 on enclosed inquiry slip ▲

Rolling Doors & Partitions

Cookson Co.—Details of the 1959 line of Cookson rolling doors and partitions are content of 16-page Bulletin 901. Selection guidance is offered on steel rolling service doors, fire doors, steel and aluminum rolling grilles, extruded aluminum counter doors, and wood side-coiling partitions. UL Label requirements are fully outlined.

▲ For more details circle NED-811 F9 on enclosed inquiry slip ▲

Quick-Release Pin

General Fastener Corp.—Single and double acting, positive locking, Quick-Release pins with protruding steel ball locking system are offered in drive-out or nondrive-out styles. Usable in aircraft, marine, transportation, industrial, and electronics applications, pins are fully detailed in Bulletin 100.

▲ For more details circle NED-812 F9 on enclosed inquiry slip ▲

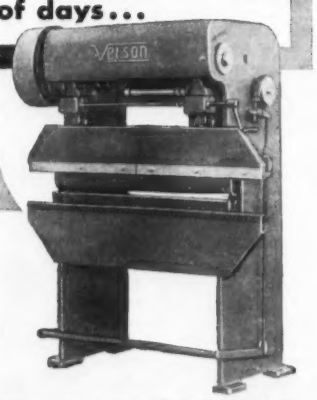
Retractible Multiconductor Cable

Spectra-Strip Wire & Cable Corp.—Spectra-Flex multiple conductor flat cable is now offered with a built-in steel coil spring which makes it self-retracting. It is available in a range of conductors from 2 to 100 with vinyl insulated No. 14 through 30 wire. Full details are given in 10-page bulletin.

▲ For more details circle NED-813 F9 on enclosed inquiry slip ▲

$1600*

will put this Power Press Brake to work in your shop in a matter of days...



IMMEDIATE DELIVERY FROM STOCK

STANDARD DIES
48" long, 90° "V" dies for handling 16 ga. stock in the 16-48 are priced at $102.

If you're trying to "get by" without a power press brake . . . or if you're tying up big brakes on small jobs . . . here's the answer to your problem — a rugged Verson Model 16-48 press brake. You can get one right "off the shelf" for only $1600*. You get the famous Verson all steel construction plus proved-in-service Verson design. Capacity is 16 ga. x 48" of mild steel. Write for complete specifications and then place your order. That's all there is to it . . . no involved proposals . . . no delays.

*Prices F.O.B. Chicago, less dies; subject to change without notice.

Verson
ORIGINATORS AND PIONEERS OF ALLSTEEL STAMPING PRESS CONSTRUCTION
VERSON ALLSTEEL PRESS CO.
9329 S. Kenwood Avenue, Chicago 19, Illinois
8300 S. Central Expressway, Dallas, Texas

▲ For more details circle NED-814 F9 on enclosed inquiry slip ▲

TAYLOR BI-THERM* DIAL THERMOMETER

Easy Reading: A quick, reliable temperature indicator, ideal for applications where an easy-reading, low cost, direct connection thermometer is desired. Accurate to ±1% of scale, because it is unaffected by ambient temperatures. Silicone-damped to prevent pointer chatter and improve speed of response. All-welded stainless steel construction with hermetically sealed bezel. Angle stem, 3" or 5" dials; straight stem ,5" only. 4", 6", 9" and 12" stems. Separable wells, ¾" and 1". Range limits minus 40° to plus 750°F. Ask your Taylor Field Engineer, or write for Bulletin 98267. Taylor Instrument Companies, Rochester, N.Y., or Toronto, Ontario.

*Reg. U.S. Pat. Off.

Taylor Instruments! MEAN ACCURACY FIRST

▲ For more details circle NED-815 F9 on enclosed inquiry slip ▲

FREE!

20-PAGE ILLUSTRATED BROCHURE ON FULLER ROTARY COMPRESSORS

Full details on sizes, capacities, applications of these vibrationless, compact, efficient compressors. Illustrated case histories of maintenance-free operation point the way to lower costs for you. *Send today for this valuable brochure!*

1182
C-339

TRADE MARK

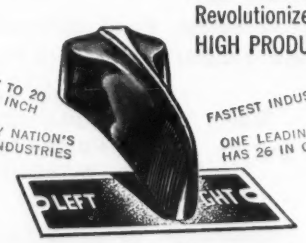
Fuller
. . . . pioneers in harnessing AIR

FULLER COMPANY
154 Bridge St., Catasauqua, Pa.
SUBSIDIARY OF GENERAL AMERICAN TRANSPORTATION CORPORATION
Birmingham • Chicago • Kansas City • Los Angeles • New York • San Francisco • Seattle

▲ For more details circle NED-816 F9 on enclosed inquiry slip ▲

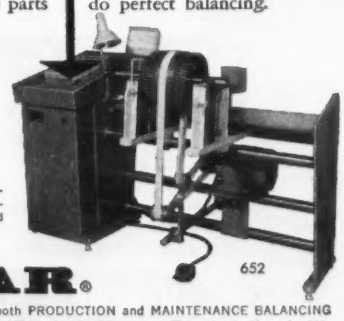
NEW
Bear BeKomatic Balancers
Revolutionize
HIGH PRODUCTION Balancing

SENSITIVITY TO 20 MILLIONTHS INCH
PROVEN BY NATION'S LEADING INDUSTRIES
FASTEST INDUSTRIAL BALANCER
ONE LEADING MANUFACTURER HAS 26 IN OPERATION



Single Lever Control Does It!

A flick of the wrist shows both magnitude and location of unbalance. Unskilled workers can balance up to 200 parts an hour . . . sitting or standing. One large dial tells operator everything he has to know to do perfect balancing.



Write for FREE DATA BULLETINS giving full information on both BeKomatic and Bear Balancers.

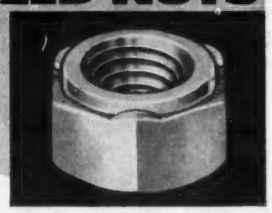
BEAR®

652

the most complete line for both PRODUCTION and MAINTENANCE BALANCING
BEAR MFG. CO., Dept. N-2B, Rock Island, Ill.

▲ For more details circle NED-817 F9 on enclosed inquiry slip ▲

These 2 WELD NUTS for blind assemblies

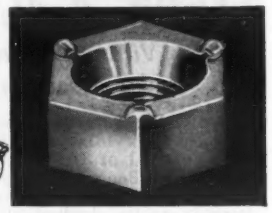


will give you

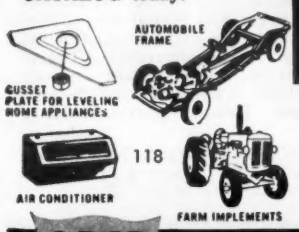
- Easier Positioning
- Quicker Fastening
- Extra Threaded Depth
- Less Cost

Available with or without Gripco locking feature. Three weld projections on bottom of nut provide a firm non-rocking electrical connection during welding. Write for samples and NEW CATALOG today.

Gripco Pilot-Projection Weld Nut, circular pilot designed, provides quick, easy positioning of nut in bolt hole for instant resistant welding. No jigs, no fumbling, no waste of time. Weld spatter cannot foul threads. Two pilot heights for different metal gauges.



Gripco Countersunk Weld Nut eliminates time-wasting retapping of nuts after welding. Exclusive countersunk nut bottom eliminates fouling of threads by weld spatter. No time wasting false starts, no cleaning of damaged threads, nut ready to receive bolt immediately.



GRIP NUT COMPANY
106 Maple Ave. • South Whitley, Ind.

▲ For more details circle NED-818 F9 on enclosed inquiry slip ▲

LUBRICATION ENGINEERS ... write for this folder

the MEYERCORD co.
Dept. K-316, 5323 West Lake St., Chicago 44, Illinois

▲ For more details circle NED-819 F9 on enclosed inquiry slip ▲

New Processes & Materials

ARCHITECTURAL SEALANT
elastic tape has neoprene core

Neoprene core incorporated in Pressureseal synthetic rubber sealer provides it with ability to "give and take" with contraction and expansion. The elastic compound tape is Presstite No. 162 which has good plasticity, adhesion, and weather resistance. Two materials together provide an elastic bond for a tight seal and a resilient cushion for absorbing pressure loads. Sample is available. Made by **American-Marietta Co.**, Presstite Div., 39th & Chouteau Avenue, St. Louis 10, Mo.

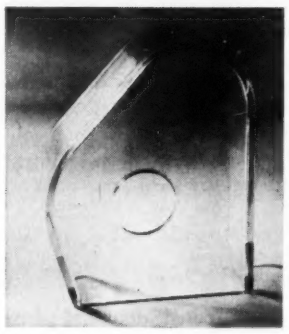
▲ For more details circle NED-821 F9 on enclosed inquiry slip ▲

DRY LUBRICANT
usable under water conditions

Water mixing valves and other allied equipment can be coated with Life Lube, a permanent, corrosion resistant dry lubricant. It works well under varying water conditions and has good chemical and thermal stability. Fast moving mechanisms can also be coated. Coating is 0.0001 to 0.0002 in. thick and is permanently bonded to the metal surface. Application is done on a mass production basis at the plant of **Fairchild Camera & Instrument Corp.**, 5 Aerial Way, Syosset, L. I., N. Y.

▲ For more details circle NED-822 F9 on enclosed inquiry slip ▲

WATER-CLEAR PLASTIC
thermosetting, heat resisting type



Maraglas epoxy resin plastic provides 90 per cent light transmission, will not discolor, and has low shrinkage of 0.0025 in. per inch. It is crystal clear and resists damage and distortion caused by high temperatures. Material is cast without complex equipment into bubble-free shapes with hard, weather-resistant surfaces. Resin is supplied as a low viscosity liquid which does not need melting before blending with a liquid hardener. The blend has a 10-hr pot life. Lasting bond is formed with many other materials, allowing its use as a laminating resin or adhesive. Sample kit is available for $6. Made by **Marblette Corp.**, 37-31 30th St., Long Island City 1, N. Y.

▲ For more details circle NED-823 F9 on enclosed inquiry slip ▲

NEW Complete Guide on how to CUT COSTS with Kinnear Rolling Doors

New 1959 data on upward-acting doors for every need. Full details on world-famous interlocking steel slat doors, *originated by Kinnear!*—the most versatile doors made. Shows Kinnear Rolling SERVICE doors and FIRE doors, Rolling GRILLES, ROL-TOP doors and others . . . also MOTOR OPERATORS for push-button operating convenience. No obligation.

WRITE TODAY! Let us send you this NEW DOOR DATA!

The KINNEAR Mfg. Co.
FACTORIES: 3017 Fields Avenue, Columbus 16, O. Also: 1742 Yosemite Ave., San Francisco 24, Calif.

Saving Ways in Doorways KINNEAR ROLLING DOORS

▲ For more details circle NED-824 F9 on enclosed inquiry slip ▲

LOOK... If you LOOK for Top Value in Disc Equipped Bronze Valves

THE FIRST renewable composition disc valve was a Jenkins Valve, originated nearly a century ago. Compare today's Fig. 106-A Bronze Globe with any other. See why so many valve users agree that a *Jenkins* is still the first for top value.

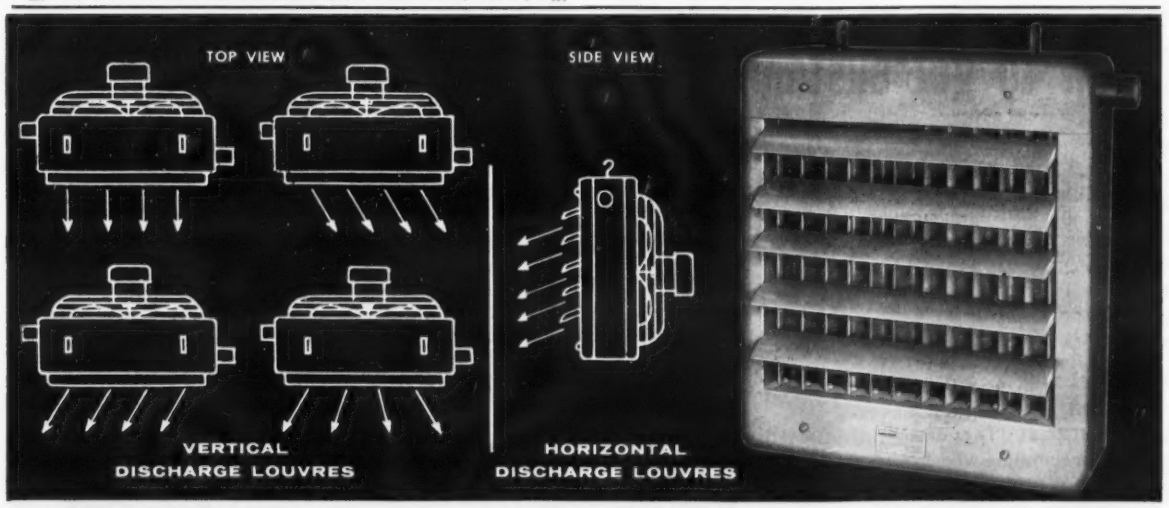
Among the dozens of superiorities of the Fig. 106-A are: **One-piece screw-over bonnet** with bevel joint between body and bonnet that acts as an internal brace against the crushing effect of bonnet. **Curved diaphragm** to protect seat from distortion. **Higher, wider raised seat** that permits more reseating operations and lengthens disc life. **Heavier spindle** with more threads. **Slip-on, stay-on** disc holder. **Body** with extra thick walls.

WRITE for folder No. 189-B that describes all of the money-saving features of Fig. 106-A and its companion Angle and Check valves. Jenkins Bros., 100 Park Ave., New York 17.

SOLD THROUGH LEADING DISTRIBUTORS EVERYWHERE

JENKINS VALVES
LOOK FOR THE JENKINS DIAMOND
JENKINS SINCE 1864

▲ For more details circle NED-825 F9 on enclosed inquiry slip ▲



YOU'RE LOOKING AT THE NEW DUNHAM-BUSH TYPE "H" UNIT HEATER THAT CONTROLS BOTH HEAT SPREAD AND THROW

Arrangement of both horizontal and vertical discharge louvres (standard equipment—no extra cost) in these new unit heaters affords efficient control of both heat spread and distance of throw. This dual control effects extra efficiency and extra economy required in factories, commercial and institutional buildings. The new Dunham-Bush Type "H" Unit Heaters are designed for either steam or hot water systems. Capacity range from 65 to 1200 EDR. Working pressures up to 150 psi. Long life is assured with aluminum heating element fins. Motors are sleeve bearing—single and three phase.

SEND FOR FILE NO. 1306C

DUNHAM-BUSH, INC.
WEST HARTFORD 10 • CONNECTICUT • U.S.A.

▲ For more details circle NED-820 F9 on enclosed inquiry slip ▲

Manufacturing supervisors watching line performance specify PROTO TOOLS

Proto Power and Impact Sockets, available in 1/4", 3/8", 1/2", 5/8", 3/4", and 1" square drive. Openings from 3/16" to 3 1/8". Full assortment attachments and adapters. Larger sizes, special designs to your order. Meet Fed. Spec. GGG-W-660. Pages 21-27 in Proto Catalog give full details and dimensions.

Proto manufactures more than 2172 professional tools for all industries; guaranteed to do their jobs. Highest standards of forging, heat treat, and finishing in special analysis alloy steels.

PROTO TOOLS

2223 Santa Fe Avenue, Los Angeles 54, California
523 Allen Street, Jamestown, New York
1723 Oxford East, London, Ontario, Canada

PROTO IS A DIVISION OF PENDLETON TOOL INDUSTRIES, INC.

For more details circle NED-826 F9 on enclosed inquiry slip

This DESIGN GUIDE tells you how and where to use grating and treads

- New Specifications
- New Installation Methods
- New Applications

24 page, information-packed Data Book on grating of carbon steel, aluminum, and alloy metals for special situations.

WRITE FOR YOUR FREE COPY OF BULLETIN 2527-R, TODAY

BLAW-KNOX COMPANY

BLAW-KNOX

Blaw-Knox Equipment Division
Pittsburgh 38, Pennsylvania

For more details circle NED-827 F9 on enclosed inquiry slip

New Literature & Catalogs

Felts of Various Types

Continental Felt Co.—Swatch folder on industrial felts includes information pertaining to functional advantages and special applications of wool and synthetic fiber felts. Also offered is a color chart and swatch folder of fashion felt displaying over 70 colors.

For more details circle NED-828 F9 on enclosed inquiry slip

Heat Exchangers

Brown Fintube Co.—Specifications Manual M-100 on double pipe or hairpin heat exchangers serves as a guide for those specifying such equipment. Fintube elements can be combined in series, parallel, or series-parallel to eliminate the expense of designing different units for each use. Dimensional drawings are included in the 9-page spiral-bound manual.

For more details circle NED-829 F9 on enclosed inquiry slip

Cellulose Wadding

Personal Products Corp., Cel-Fibe Div.—Properties and uses of Cel-Fibe cellulose wadding are related in 8-page illustrated bulletin. Offered in rolls and sheets, plain or embossed, backed or unbacked, moisture absorbent or resistant, it is used as a product component and cushioning material.

For more details circle NED-830 F9 on enclosed inquiry slip

Data on Aluminum Tubes & Shapes

Calumet & Hecla, Inc., Wolverine Tube Div.—32 pages of valuable engineering data on drawn aluminum tube and extruded aluminum tube and shapes comprise Catalog J7495. Presented are special features of aluminum; metallurgical aspects; mechanical, physical, and chemical characteristics; tolerance standards; and extrusion definitions. Also tabulated are available alloys, lengths, shipping limitations, and range of sizes.

For more details circle NED-831 F9 on enclosed inquiry slip

Containers, Conveyor Guard & Pallets

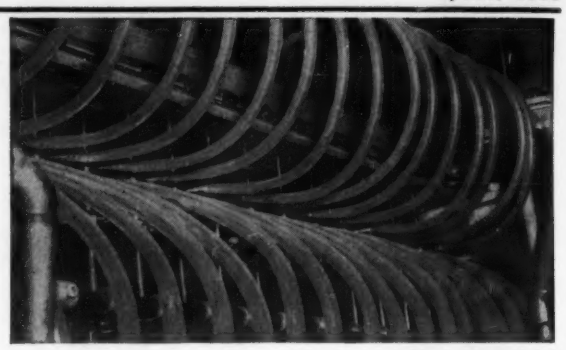
Tri-State Engineering Co.—Various models of Corgotainers, made of heavy gage welded wire for handling of many diverse types of products are described and illustrated in 8-page Bulletin B-100. Conveyor Guard which offers protection against objects falling from overhead conveyors, and welded steel wire pallets are also covered.

For more details circle NED-832 F9 on enclosed inquiry slip

Slip Type Pipe Fittings

Wallace Supplies Mfg. Co.—Tapered diamond slip fittings for structural designs are subject of 8 and 12-page booklets. Tapered diamond screw housings cover about 30 per cent of the fitting barrels for strong thread support. They are used for making frames, railings, stands, racks, tables, and supports, and can be reused. Specifications of all available types and sizes are given.

For more details circle NED-833 F9 on enclosed inquiry slip



TYGON® flexible plastic TUBING

- Virtually Unlimited Applications
- Quick and Easy to Set-Up

Tygon Tubing offers a unique combination of advantages. Its glass-like clarity permits visual inspection and control of flow. It resists oils, greases and chemicals. Because of its extreme flexibility, Tygon Tubing can be installed in minutes. Its hard, smooth bore is easily flushed clean. Physically tough and abrasion-resistant, Tygon Tubing provides long, trouble-free service life.

Tygon Tubings are available to handle full vacuums, or braid-reinforced to withstand pressures up to 300 psi. Over 65 sizes are available up to 4" I.D.

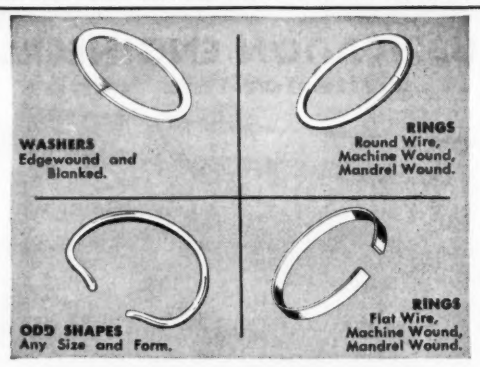
440-F

Write for free Bulletin T-97...today!

OUR 100th YEAR

U. S. STONEWARE
AKRON 9, OHIO

For more details circle NED-835 F9 on enclosed inquiry slip



solder preforms

Silver Copper Aluminum Soft Solders

Write for 16 page booklet on better brazing.

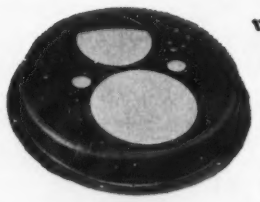
1. End Wasted Time In Placing Silver Solder in position for brazing.
2. Speed Assembly Work.
3. Eliminate Rejects.
4. Meter Silver Solder to Flow In and Around Joints.

See our catalog in Sweets Product Design File 7/LU

LUCAS-MILHAUPT Engineering Co.
5070 South Lake Drive, Cudahy, Wisconsin

For more details circle NED-836 F9 on enclosed inquiry slip

How to get custom stamping without special tooling!



ONE HIT PIN POINTS 63 HOLES in 60" dia. dish-stamped boiler door with tolerance of 1/16" on dia. and flat across flange within 1/16".

COST CUT FROM $8.49 to $2.59 per unit through use of dies in COMMERCIAL "Die Bank" in custom stamping wheel covers for aircraft towing tractor.

STAMPED CLUTCH HOUSING held to tight tolerances of +.005" -.000", +.005" -.005" and +.000" -.010" eliminates costly machining.

"Die Bank" of more than 20,000 available die components saves cost of new dies

Die components from COMMERCIAL's extensive "Die Bank" are economically meeting unusual stamping requirements for many industries—with extensive savings in tooling expense. In many instances, the "Die Bank" combined with a small additional tool cost will handle your exact requirement.

Modern press equipment—100-ton to 2000-ton—bangs out more hits per hour to further contribute to lower unit cost for medium to heavy stampings.

SEND FOR FREE BULLETIN

Illustrated Bulletin 200-P3 describes COMMERCIAL's routine handling of many unusual metal forming jobs for industry.

Write Commercial Shearing & Stamping Co., Dept. J23, Youngstown 1, Ohio.

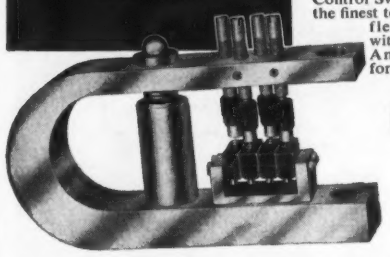
COMMERCIAL shearing & stamping

For more details circle NED-834 F9 on enclosed inquiry slip

now control mechanical forces at various load points

Dillon force control switch

Here's a compact instrument that enables you to control motors, light remote control signals or operate warning devices with split-hair accuracy . . . *automatically!* Available in TENSILE or COMPRESSION, the Dillon Force Control Switch is furnished with from 1 to 4 adjustable switches for controlling forces at countless load points. Capacities range from 0-100 lbs (for delicate loads) to 0-50,000 lbs (for most massive loads). Protected against accidental overloading, the Dillon Force Control Switch is constructed of the finest tempered steel and will flex millions of cycles without losing resiliency. An ideal safety device for overhead hoists!



6 different ranges

WRITE FOR FREE ILLUSTRATED LITERATURE AND LOW PRICE SCHEDULE.

W. C. Dillon & COMPANY, INC.
14578NE Keswick St.
Van Nuys 1, Calif.

▲ For more details circle NED-837 F9 on enclosed inquiry slip ▲

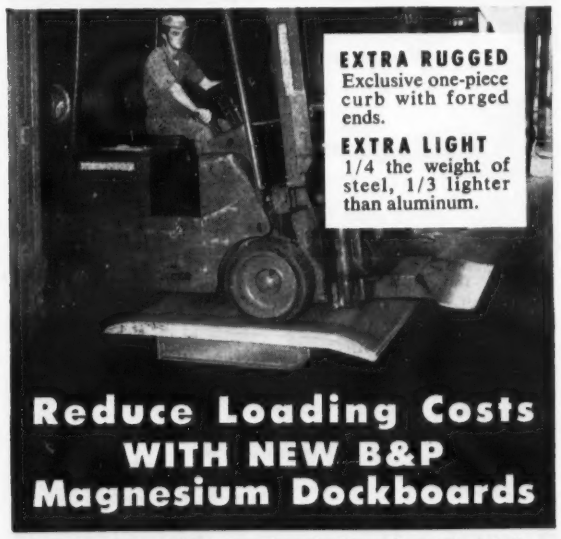
THESE MUELLER BRASS CO. ENGINEERING MANUALS help you select the best materials and best methods of fabricating a product

Mueller Brass Co. engineers have carefully selected and compiled the data contained in these technical manuals. Send for any or all of the free manuals that interest you; check appropriate box, clip out and mail with your return address.

- ☐ FORGINGS
- ☐ 600 SERIES BEARING ALLOYS
- ☐ COPPER BASE ALLOYS IN ROD FORM
- ☐ SCREW MACHINE PRODUCTS
- ☐ TUF-STUF ALUMINUM BRONZE
- ☐ COLD-PREST IMPACT EXTRUSIONS
- ☐ SINTEEL POWDER METAL PARTS
- ☐ FORMED COPPER TUBING

MUELLER BRASS CO. PORT HURON 37, MICHIGAN

▲ For more details circle NED-838 F9 on enclosed inquiry slip ▲



Reduce Loading Costs WITH NEW B&P Magnesium Dockboards

Lighter, stronger B&P Magnesium dockboards get the job done faster, easier and at less cost. All dockboards are heat treated for stress-relief after welding. B&P offers these advantages—one-piece stringer with forged ends, full-length hand grips, yellow curb markings, crowned contour, beveled edges, safety tread, wide range of sizes for every loading need.

SEND FOR FREE LITERATURE on long-lasting Magnesium dockboards, hand trucks and other mobile handling equipment by B&P.

BROOKS & PERKINS INC.
1950 W. Fort St. • Detroit 16, Mich.
Dealers in Principal Cities MH-21

▲ For more details circle NED-839 F9 on enclosed inquiry slip ▲

New Processes & Materials

DIP PLASTIC COATING cushions and protects small parts

Rust preventive oil film is left on metal parts when No. 815 Hot-Melt Dip-Pak clear plastic coating is stripped away. The coating is stable under prolonged heating, resists darkening, emits no odor during coating process, melts at 375° F, and is ready for use at 350 to 360° F. Application is to small tools, dies, gears, machined parts, both in storage and for shipping. Material is supplied in solid blocks for heating in an electric or oil-jacketed pot. It can be reused. Made by **Fidelity Chemical Products Corp.**, 470 Frelinghuysen Ave., Newark 5, N. J.

▲ For more details circle NED-840 F9 on enclosed inquiry slip ▲

METALLIC BAKED ENAMEL retains mirror-like brilliance

Metal products normally finished with baked enamel can be given attractive new color effects with high degree of brightness and depth with StaR-Mite alkyd baking enamel. The high metallic content enamel retains its mirror-like brilliance and is resistant to mildew in humid climates. It requires no modification for spraying. Formulated by **Rinshed-Mason Co.**, Milford at Epworth, Detroit 10, Mich.

▲ For more details circle NED-841 F9 on enclosed inquiry slip ▲

GLASS HEAT SHIELD protects workers in high heat areas

Pyrex brand plate glass heat shield for protecting personnel in intense heat areas reflects 65 per cent of the long wave infrared rays. Reflecting medium is a thin, nonclouding, transparent metallic film which covers the glass. It resists abrasion and chemical attack. The glass itself does not become hot and withstands heat, flying slag, and splashing molten metal. In addition to standard sizes of 24 x 24, 24 x 36, and 24 x 48 in., shields can be made in specified sizes. It is offered mounted in a gasketed, shock absorbent steel frame. Made by **Corning Glass Works**, Box 544, Corning, N. Y.

▲ For more details circle NED-842 F9 on enclosed inquiry slip ▲

Bin GATES! All Types All Sizes ...For All Materials

Webster DUPLEX Gate

Motor-operated, this positive-acting gate can be supplied with remote control. Regularly made of steel, the Webster DUPLEX Gate can also be furnished with cast iron housing and gate leaves—or cast side gate leaf panels with renewable steel gate bottom plates.

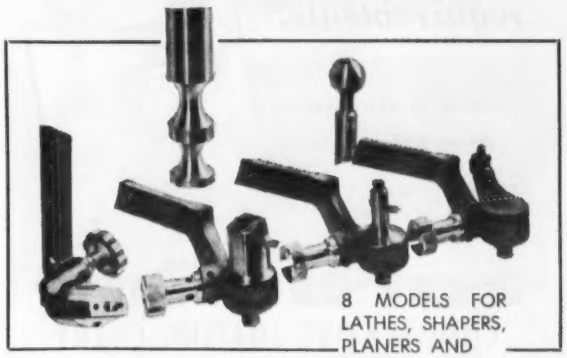
Webster also manufactures a complete line of Drip and Sift Proof Gates; Dust Proof Rack and Pinion Gates; Simplex, Undercut and Slide Gates; and Rotary Cutoff Valves for all industries.

Write us—outlining your requirements.

Webster MANUFACTURING, INC.
DEPT. NE-69 TIFFIN, OHIO
BULK MATERIALS HANDLING EQUIPMENT
Offices in all Principal Cities

▲ For more details circle NED-843 F9 on enclosed inquiry slip ▲

PRECISION SHAPLANE RADIUS TOOLS



8 MODELS FOR LATHES, SHAPERS, PLANERS AND BORING MILLS . . . .

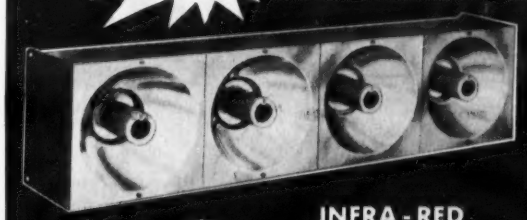
Range: 3/8" to 3" for concave radii on lathes. Two sizes for convex radii (Balls up to 2½" dia.) on lathes. Also heavy duty model for radii to 6" on planers, etc.

Write for Circular *Patent Pending*

C. B. TEETER, TOOL ROOM SPECIALTIES
3443 N. Greenview Ave., Chicago 13, Ill. Phone: DRexel 3-3571

▲ For more details circle NED-844 F9 on enclosed inquiry slip ▲

NO BULBS OR SOCKETS TO BURN OUT! NO COLD OR HOT SPOTS



with driQuik INFRA-RED INTERLOCKING OVEN SECTIONS

ovens any size or shape

There's nothing anywhere like the driQuik infra-red generators which are lava coated and deliver far more infra-red rays with less power consumption than any other method known. They not only cut down replacement cost, they're immune to shocks, vibration, moisture.

WRITE TODAY FOR LITERATURE

showing how you can speed up production and reduce costs by building or having us build driQuik ovens for your needs.

driQuik DIVISION DRY CLIME LAMP CORP. GREENSBURG, INDIANA

▲ For more details circle NED-845 F9 on enclosed inquiry slip ▲

"POSITIVELY"

Graham IS THE MOST ACCURATE Variable Speed Drive

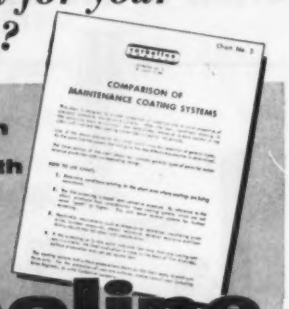
Now get accuracy of speed set, reset and speed holding over full range — any desired maximum to zero — with the most *positive* of infinitely variable speed drives . . . the GRAHAM. More *positive* than the induction motor that drives it, the GRAHAM gives unequalled speed regulation with change of load, plus built-in overload protection. The GRAHAM offers a wide choice of built-in motors, reducers and controls — pneumatic, electrical and a micrometer type in 4000 graduations for full range.

SEE OUR CATALOG IN SWEET'S PRODUCT DESIGN FILE OR WRITE FOR COPY

Graham TRANSMISSIONS, INC.
Menomonee Falls, Wisconsin

▲ For more details circle NED-846 F9 on enclosed inquiry slip ▲

Which maintenance coating system is best for your requirements?



Make your own comparison with this *Free*

carboline

COMPARATIVE COATING CHART

Covers all major types of protective coatings, shows how effectively each protects under different corrosive conditions. Also shows coverage per gallon, mil thickness per coat, cost per square foot and cost per mil foot. This chart will pinpoint the coating system that can serve you most effectively and economically under your particular corrosive conditions.

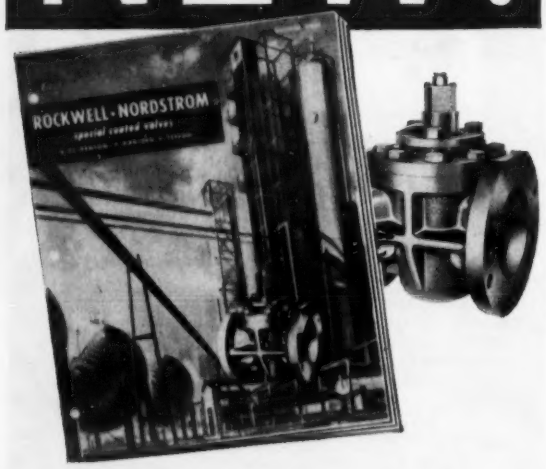
Send for your free copy today!

carboline COMPANY
32-J Hanley Industrial Ct.
St. Louis 17, Mo.

Specialists in Corrosion Resisting Synthetic Materials

▲ For more details circle NED-851 F9 on enclosed inquiry slip ▲

NEW!

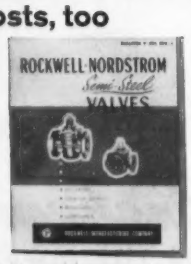


How special coated valves cut costs on corrosion services

This new booklet describes how special coatings applied to Rockwell-Nordstrom semi-steel or steel valves give the corrosion resistance of costly, special alloys at a fraction of the cost. Find out how you can get tighter shut-off, easier, more dependable valve control on even toughest services . . . and at lower cost.

These free booklets can help you cut your valve costs, too

Details on Rockwell-Nordstrom steel, stainless, bronze, Monel and other corrosion resisting valve patterns.



Details on Rockwell-Nordstrom semi-steel valves for normal temperature, normal pressure services plus special valve accessories.

Write today for these Rockwell-Nordstrom valve booklets. They'll help you get better flow control at lower cost. Rockwell Manufacturing Company, Pittsburgh 8, Pa. Canadian Valve Licensee: Peacock Brothers Ltd.

ROCKWELL-Nordstrom VALVES
another fine product by
ROCKWELL

▲ For more details circle NED-852 F9 on enclosed inquiry slip ▲

New Literature & Catalogs

Pipe & Vessel Covering

Dow Chemical Co.—Styrofoam pipe and vessel covering, a low temperature, low thermal conductivity pipe insulation which serves as an excellent vapor barrier is subject of 12-page illustrated Bulletin 157-57. Engineering data, application techniques, and charts showing recommended thicknesses and heat gain are included.

▲ For more details circle NED-853 F9 on enclosed inquiry slip ▲

Speed Reducers

Western Gear Corp., Industrial Products Div.—Engineering information and specifications on the line of SpeedMaster vertical-helical speed reducers are found in 16-page illustrated Bulletin 5908. Both double and triple reduction models are covered and selection information is presented for many different types of installations.

▲ For more details circle NED-854 F9 on enclosed inquiry slip ▲

Reusable Shipping Containers

DeVilbiss Metal Fabricators Co.—Advantages and major economies resulting from use of reusable steel and aluminum shipping containers are related in 12-page illustrated Bulletin 801. Various types are designed and built for shipping of critical parts and components in electronics, aircraft, missile, and other fields.

▲ For more details circle NED-855 F9 on enclosed inquiry slip ▲

Dust & Fume Control System

Kirk & Blum Mfg. Co.—Sixty different plant installations, from a wide variety of major industries, are illustrated and described in 52-page catalog on "Dust & Fume Control Systems." Twelve pages are devoted to systems for the metalworking industry, whereas special sections detail Series C centrifugal collectors and Type M and W unit collectors.

▲ For more details circle NED-856 F9 on enclosed inquiry slip ▲

Scaffold Casters

Faultless Caster Corp.—All five series of scaffold casters described in 6-page Brochure 11659 have simultaneous swivel and wheel locks to assure safe handling of mobile equipment. All have hardened double ball-bearing swivels. Brochure covers 77 stem-type and 72 plate-type casters with load capacities from 175 to 1500 lb.

▲ For more details circle NED-857 F9 on enclosed inquiry slip ▲

Data on Polystyrenes

Koppers Co., Plastics Div.—Properties, suggested applications, and advantages of Dylene polystyrenes comprise content of Technical Bulletin C-9-231. Guidance to the use of various types of these plastics in end products is offered, as are design considerations, fabricating and finishing techniques, and available engineering service.

▲ For more details circle NED-858 F9 on enclosed inquiry slip ▲

TIME-SAVING DELIVERY FROM STOCK!

...on Carpenter Stainless No. 20 and 20 Cb

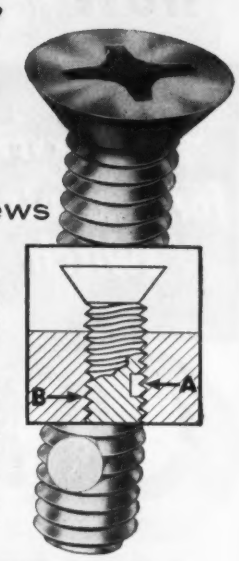
- best answer to most corrosion problems
- excellent workability and weldability
- outlast other stainless and high alloy steels
- cut-to-size orders filled promptly from nation-wide stocks
- wide range of sizes available from stock
- order from any Carpenter representative or distributor in over 40 cities
- Send for Technical Bulletin 108A and latest stock list

THE CARPENTER STEEL COMPANY
Alloy Tube Division, Union, N.J.

▲ For more details circle NED-859 F9 on enclosed inquiry slip ▲

WON'T WORK LOOSE!

Continental HOLTITE **NYLOK®** Self-locking Screws



Resilient nylon plug (A) sets up a lateral thrust, wedges mating threads together (B). Locking is positive — seated or unseated. Screw cannot work loose.

The simplest self-locking fasteners, NYLOK Screws are easy to drive . . . can be removed and replaced . . . act as seal for gases, liquids.

NYLOK may be the answer to your assembly problem. For complete details write Dept. ND.

CONTINENTAL
SCREW COMPANY, NEW BEDFORD, MASS.
HOLTITE FASTENERS
PHILLIPS AND SLOTTED HEAD TAPPING SCREWS, WOOD SCREWS, MACHINE SCREWS, SEMS, BOLTS, NUTS, STANDARD OR SPECIAL . . . FOR ANY ASSEMBLY

▲ For more details circle NED-860 F9 on enclosed inquiry slip ▲

Match Test Proves AO's New "FYRE FREE" CLOTHING may smoke but will not burn!

Permanent-type flameproofing. Fabric can be laundered as many as ten times without loss of flameproofing. 100% cotton. Weighs only 11 to 11½ ounces per sq. yd. finished. Good tensile strength in warp and fill, long-lasting, mildew-resistant. Available in complete line: Sleeves, Cape Sleeves, Overalls, Coats, Coveralls, Hip Leggings, Pants. For spot welding, drop forging, light metal splash, etc. Your nearest American Optical Safety Products Representative can supply you.

American Optical COMPANY SAFETY PRODUCTS DIVISION
SOUTHBRIDGE, MASS.
Safety Service Centers in Principal Cities

ALWAYS INSIST ON TRADEMARKED SAFETY PRODUCTS

▲ For more details circle NED-861 F9 on enclosed inquiry slip ▲

THERE'S A *Wayne Compressor* FOR EVERY PLANT AND PURPOSE

2 STAGE 1—20 HP
Pre-tested, guaranteed usable air output. Made to assure you of a more efficient supply of air at the pressures and quantities you need . . . where you need air. Supplements existing air supply . . . assures air in the remotest locations. Pressures to 175 lbs. vertical and horizontal types.

LOW PRESSURE 2 STAGE
Combines large bore, low speed, low pressure, dual stage in amazing operating efficiency for intermittent or continuous service. Available for pressures to 100 lbs.—horizontal or vertical models . . . 1½ to 20 HP.

SINGLE STAGE ⅓ to 1½ HP
Single stage, one and two cylinder, air cooled. Deep heat radiating fins on cylinder block. Stainless steel disc type valves. Available in vertical or horizontal models to 125 lbs. maximum pressures.

CHECK THE EXTRA VALUE IN WAYNE COMPRESSORS.

WRITE FOR CATALOG TO: THE WAYNE PUMP CO. Industrial Division Fort Wayne 4, Indiana, Div. Symington Wayne Corporation

Wayne COMPRESSORS

▲ For more details circle NED-862 F9 on enclosed inquiry slip ▲

Webster DIRECT READING
HYDRAULIC TYPE
FORCE GAUGES

Measures electrode pressure on spot welders and roll welders. Makes compressive tests on forming, dimpling and upsetting operations. Also useful for weighing. Insulated contact surface prevents damage if welder is accidently fired. Easy setups, no delicate mechanisms, 5 ranges: 0-1000, 6000, 10,000, 20,000, 40,000 lbs. 3½" diameter gauge with accuracy to 1%. Reads directly in pounds—no conversion scales. Write for details.

Webster INSTRUMENT, INC.
Dept. N, 11856 Mississippi Ave., Los Angeles 25, California

▲ For more details circle NED-863 F9 on enclosed inquiry slip ▲

DOUBLE CHAIN LIFE!

Here's the *low-cost answer to chain breakdowns* caused by link-wear, stretch, corrosion and friction. OIL-RITE Chain Oilers feed oil by gravity through solenoid and sight feed valve to brush which rides the chain. Solenoid *starts and stops with driving motor*, making operation automatic, oiling only when chain moves. Drop feeding adjustable. 9 oz. — 1 gal. in capacity with brushes to suit your chains.

GIVE YOUR PLANT ALL THESE BENEFITS!
- Safe, sure chain lubrication
- Reduce chain wear
- Eliminate costly hand oiling
- Cleaner, less hazardous floors

Many styles of Electro and Manual Chain Oilers available. Write for Free Bulletin.

Oil-Rite CORPORATION
2364 WALDO BOULEVARD
MANITOWOC, WISCONSIN

Oil Cups • Dispensers • Oiling Systems • Valves • Oil Gages • Chain Oilers

▲ For more details circle NED-864 F9 on enclosed inquiry slip ▲

New Processes & Materials

HIGH PRESSURE LUBRICANTS resist acids, heats to 1900° F

Two years of field trials reveal that Almasol lubricants have high load carrying strength, resistance to acid wear, and the ability to retain qualities at up to 1900° F temperatures. Lubricant is a highly refined aluminum magnesium silicate compatible with all forms of petroleum. It forms micro-thin layers of natural lubricant between the fluid-film of oil and metal surface. First layer bonds itself to metal surface. Line includes No. 1225 bearing and chassis lubricant, No. 607 and 608 enclosed gear lubricants, No. 158 aircraft lubricant, and No. 161 bearing and instrument lubricant. Last two are made on special order only. Developed by **Lubrication Engineers, Inc.**, 2709 Race Ave., Ft. Worth, Tex.

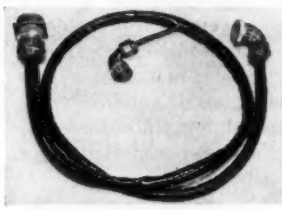
▲ For more details circle NED-866 F9 on enclosed inquiry slip ▲

FLOOR FINISH durable nonskid, nonscuff type

All types of floors can be coated with Plastall, a self-polishing floor finish that shows no streaks or lap marks. It is durable, nonyellowing, and forms a nonslip, nonscuff finish. Floors treated with the material have good water resistance and can be damp mopped or dry cleaned. Buffing restores the original luster. Plastall is easily removed for refinishing. Made by **Rochester Germicide Co.**, 333 Hollenbeck St., Rochester 21, N. Y.

▲ For more details circle NED-867 F9 on enclosed inquiry slip ▲

FLEXIBLE PLASTIC TUBING for cables, in 1/8-4 in. ID sizes



Aircon 1010J tubing made from a combination of laminated plastic materials is intended for use as conduit for missile and electronic cables. The high tensile strength material is abrasive and flame resistant, waterproof, and retains its flexibility and resistant properties under hot or cold conditions. Tubing is available in 1/8 to 4-in. ID sizes in 1/8-in. increments. It weighs 0.07 lb per inch ID per foot of length and has 70-psi burst pressure. Graduated sizes with off-shoots are suitable for cable harnesses. Tubing is offered in olive drab or other colors. Made by **Airconductors**, 367 E. Olive St., Gardena, Calif.

▲ For more details circle NED-868 F9 on enclosed inquiry slip ▲

TOKHEIM High-Vacuum HAND PUMPS for industrial liquids

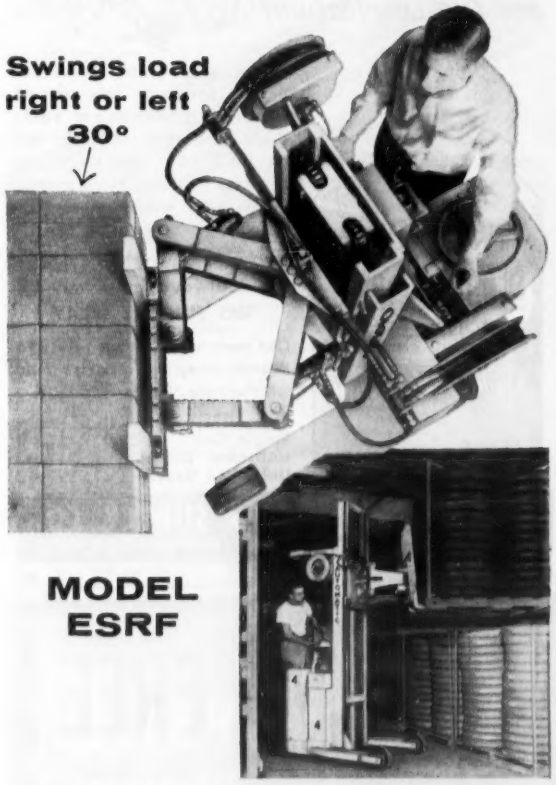
Here's an all 'round utility pump that saves much more than its cost in speeding production, improving housekeeping, preventing waste. Eliminates slippery floors and liquid accumulation so often the cause of fire and accidents. Delivers 20 gallons per 100 back and forth strokes. Pumps oil and many other liquids. (Write for approved list.) Has hose or spout outlet. Call your dealer, your Tokheim representative, or write factory.

General Products Division
TOKHEIM CORPORATION
DESIGNERS AND BUILDERS OF SUPERIOR EQUIPMENT SINCE 1901
1656 Wabash Ave. Fort Wayne 1, Ind.

Subsidiaries: Tokheim N.V., Leiden, Holland — GenPro, Inc., Shelbyville, Ind.
Factory Branch: 475 Ninth Street, San Francisco 3, California
In Canada: Tokheim-Reeder of Canada, Ltd., 205 Yonge St., Toronto, Ont.

▲ For more details circle NED-869 F9 on enclosed inquiry slip ▲

AUTOMATIC
Introduces New
"Triple-Action" Transveyor



Lifts, reaches, swings...does fast, efficient job in space too cramped for conventional trucks.

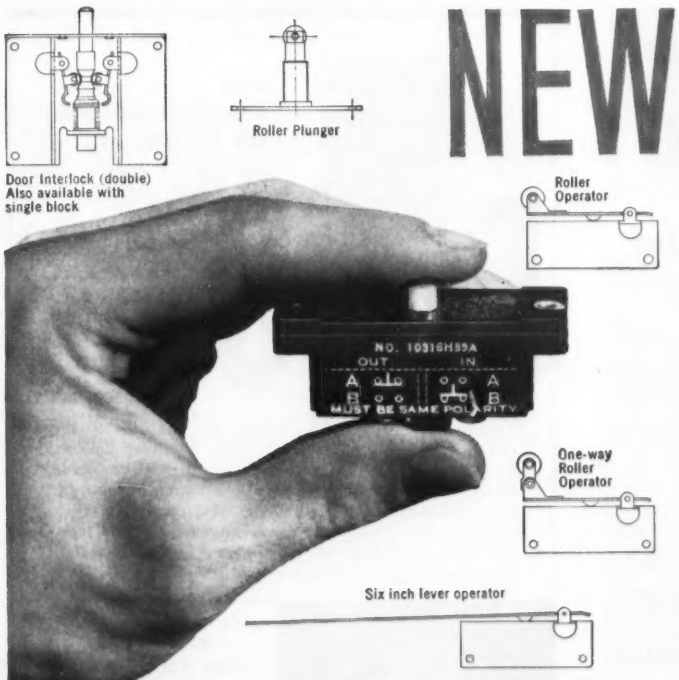
This Transveyor's unique mechanism permits higher stacking ...better use of storage space. Lifts 130" with 83" mast... literally reaches around corners...swings forks in unison 30° right or left. One control works swing and reach mechanisms together or separately. Handles various-sized skids and pallets on any stacking setup. No space between stacks because base arms don't straddle load. Load-tilt device available as extra feature. Capacities up to 4000 lbs. Convenient lease and budget terms...just fill out coupon.

Cost less to own... less to operate

AUTOMATIC TRANSPORTATION COMPANY
Division of The Yale & Towne Manufacturing Company
Dept. H-9 61 W. 87th Street, Chicago 20, Ill.
Electric Automatic Industrial Trucks
WORLD'S LARGEST EXCLUSIVE BUILDER OF ELECTRIC-DRIVEN INDUSTRIAL TRUCKS

AUTOMATIC TRANSPORTATION COMPANY
Division of The Yale & Towne Manufacturing Company
Dept. H-9 61 W. 87th Street, Chicago 20, Ill.
☐ Please rush me complete specifications on your new "Triple-Action" Transveyor, Model ESRF
☐ Include details on lease and budget purchase plans
Your Name____ Title____
Firm Name____
Address____
City & Zone____ State____

▲ For more details circle NED-870 F9 on enclosed inquiry slip ▲



NEW Industrial Duty Precision Switch

COMPACT . . . *Contact blocks measure 2½" x ¾" x 1"*

FLEXIBLE . . . *Choose from 39 ready-to-install units or combine contact blocks and operators to "custom-design" special purpose units*

DEPENDABLE . . . *New heavy duty design and construction assures ten times greater electrical and mechanical life*

Cutler-Hammer 10316 Precision Switches are built better to last far longer. Be sure you have the new descriptive bulletin detailing important design features, dimensions, and ratings. Write today for Bulletin EM154-L251.
Cutler-Hammer Inc., Milwaukee 1, Wis.

CUTLER-HAMMER

Cutler-Hammer Inc., Milwaukee, Wis. • Division: Airborne Instruments Laboratory. • Subsidiary: Cutler-Hammer International, C. A.
Associates: Canadian Cutler-Hammer, Ltd.; Cutler-Hammer Mexicana, S. A.; Intercontinental Electronics Corporation.

▲ For more details circle NED-865 F9 on enclosed inquiry slip ▲

DELAVAN

World's largest manufacturer of SPRAY NOZZLES for industrial use

You'll find the nozzle that's right for your specific requirements in the complete selection offered by Delavan.

Manufacturers all over the world rely on Delavan for high quality, precision industrial nozzles.

Whatever your nozzle requirements, specify Delavan.

Write for Catalog 33 for complete details and technical specifications.

DELAVAN *Manufacturing Company*

WEST DES MOINES, IOWA
World's largest nozzle specialist

▲ For more details circle NED-871 F9 on enclosed inquiry slip ▲

When New Molds Stick use IMS **SILICONE FLUID**

For Better Tool and Die Lubrication!

Shorten costly break-in periods! Simply spray on this perfect parting agent from self-dispensing aerosol! Useful too in PATTERN MAKING — releases patterns from master molds with minimum surface defects. Remember . . .

WHERE ANYTHING STICKS it always pays to try IMS SILICONE SPRAY

Get new tools into production sooner. Keep a few cans handy all the time. Order today!

DELIVERED PRICES
Single Can $2.00
Unbroken Dozen . . . $18.00
Unbroken Gross . . . $197.40

INJECTION MOLDERS SUPPLY CO.
3514 LEE ROAD WYoming 1-1424 CLEVELAND 20, OHIO

▲ For more details circle NED-872 F9 on enclosed inquiry slip ▲

FREE TO THE ENGINEER WITH A DESIGN PROBLEM

***Send for Spaulding's new 40-page Engineering Handbook* TODAY**

SPAULDING FIBRE COMPANY, INC.
317 WHEELER STREET
TONAWANDA, NEW YORK

Please send your new 40-page Engineering Handbook.

Name _____ Title _____
Firm _____
Address _____
City _____ Zone _____ State _____

▲ For more details circle NED-873 F9 on enclosed inquiry slip ▲

New Literature & Catalogs

Engineering Constants

First Machinery Corp., Falcon Mfg. Div.—"Handy Reference Engineering Constants" is title of 8-page folder which contains engineering constants, short cut tables, formulas, and other technical data frequently used in plant operation. Data on Falcon ribbon blenders of sanitary design are included.

▲ For more details circle NED-874 F9 on enclosed inquiry slip ▲

Retaining Rings

Ramsey Corp., Retaining Ring Div.—Over 3000 listings of sizes and types of single and two-turn wound Spirolox retaining rings are found in two retaining ring price lists. Sizes range from ½ to 10-in. diameters in 12 series or types. Special designs, materials, and finishes are detailed.

▲ For more details circle NED-875 F9 on enclosed inquiry slip ▲

Panel Instruments

Triplett Electrical Instrument Co.—Specifications for extensive series of panel and portable instruments are content of illustrated Catalog 59-I. Included are round and rectangular flush mounting dc voltmeters, millivoltmeters, microammeters, milliammeters, and ammeters as well ac voltmeters, ammeters, milliammeters, and thermo ammeters.

▲ For more details circle NED-876 F9 on enclosed inquiry slip ▲

Extending Carbon Brush Life

Superior Carbon Products, Inc.—"Get the Most Out of Your Carbon Brushes" is an 8-page technical but practical guide to the selection, application, and maintenance of carbon brushes in motors and other electrical equipment. All factors leading to maximum service life and minimum maintenance are covered. Various types of carbon brushes and their recommended uses are discussed.

▲ For more details circle NED-877 F9 on enclosed inquiry slip ▲

Aluminum Finishing Guidance

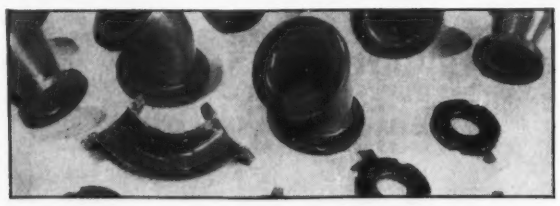
Frederick Gumm Chemical Co.—20-page manual "Aluminum Finishing" offers answers to the problems concerning the finishing of aluminum. Such operations as cleaning, deburring, etching, deoxidizing, descaling, preparation for welding, and anodizing are covered. How to treat corroded aluminum stock is explained, and available materials and techniques for finishing aluminum are described.

▲ For more details circle NED-878 F9 on enclosed inquiry slip ▲

Packaged Automatic Boilers

Orr & Sembower, Inc.—Features not included in competitive designs are emphasized in 8-page bulletin on line of mechanical pressure atomizing oil-fired and partial premixing gas-fired Powermaster packaged automatic boilers. Operational details on sizes from 20 to 100 hp are furnished.

▲ For more details circle NED-879 F9 on enclosed inquiry slip ▲



A new kind of glassed fitting

. . . glassed ductile iron with strength comparable to Glasteel's

The new Pfaudler line of glassed fittings uses *ductile* rather than gray iron and exhibits physical and chemical properties similar to those of Glasteel 59.

High strength: 60,000 tensile, 45,000 yield, and 15% elongation per ASTM-A-395-56T and 339-55. Ductile iron, after glassing, is 2½ to 3 times stronger than low-strength gray iron.

Improved thermal shock: now comparable to the resistance of Glasteel 59.

Excellent corrosion resistance: Resists all acids except hydrofluoric, even at elevated temperatures and pressures. Resists most alkaline solutions at moderate temperatures.

Availability: July 1st delivery on 45° and 90° elbows, tees, and crosses in 1½, 2, 3, 4, and 6-inch sizes.

Write for more information to our Pfaudler Division, Department NED-69, Rochester 3, New York.

PFAUDLER PERMUTIT INC.

75 YEARS CREATING FOR TOMORROW Pfaudler

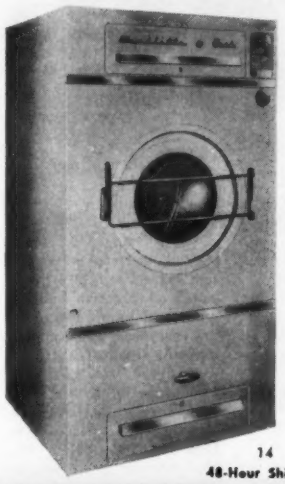
▲ For more details circle NED-880 F9 on enclosed inquiry slip ▲

Tumblette by Cook

37×30 GAS HEATED TUMBLER

PERFECT FOR MARINE AND INDUSTRIAL INSTALLATIONS

STEAM-ELECTRIC-GAS MODELS AVAILABLE, AC POWER, ECONOMICAL, EFFICIENT OPERATION ANYWHERE!



TUMBLETTE by COOK

ideal for . . .

- Factories
- Industrial plants
- Offshore Drilling Rigs
- Construction camps
- Tankers, barges
- Field camps

TUMBLETTE available in baked-on enamel or STAINLESS STEEL, resists salt air corrosion, operates well under adverse and tropical conditions.

TUMBLETTE saves time, money, manpower. Write for full information and FREE brochure.

If you have a special laundry problem, write us—no obligation.

14

48-Hour Shipment on all Standard Models

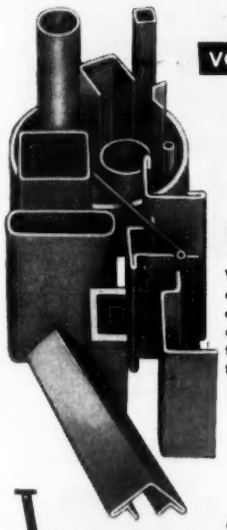
Cook Machinery Co. Inc.
4301-T S. Fitzhugh Ave. Dallas 10, Texas

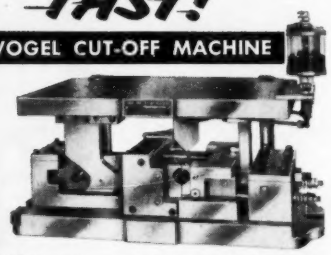
▲ For more details circle NED-881 F9 on enclosed inquiry slip ▲

SHEARS CLEAN TO ACCURATE LENGTHS

FAST!

VOGEL CUT-OFF MACHINE



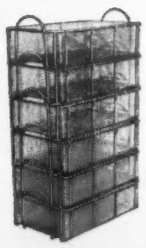


With each press stroke, unit accurately cuts off tubing and shapes into lengths of ½" ±.010", or more. The ends are cut clean with a minimum of burr or distortion . . . Shearing blades make thousands of cuts before resharpening.

No. 12 unit cuts up to ¾" O.D. x 3/32" wall.
No. 2 unit cuts up to 2" O.D. x ⅛" wall.
No. 3 unit cuts up to 3" O.D. x 3/16" wall, or up to 3½" O.D. x ⅛" wall.
Odd shapes handled in sizes equivalent to unit's O.D. capacity.

VOGEL TOOL & DIE CORPORATION
1801 NORTH 32ND AVE., STONE PARK, ILL.

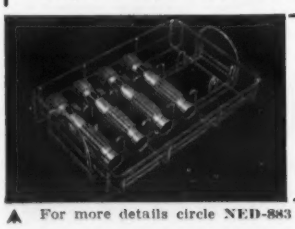
▲ For more details circle NED-882 F9 on enclosed inquiry slip ▲



PUT PARTS HANDLING ON A LOW COST BASIS

EEZY STAK® BASKETS

You can process parts for less money than it's costing you now by using Eezy-Stak parts handling baskets! Eezy-Staks have the exclusive patented "Inter-Lok" handles for convenient, compact stacking and storage. Parts handled safely . . . less risk of damage . . . rejects reduced. *Two types—compartmented baskets for segregated parts handling, open mesh type for bulk handling.* May be zinc-plated, plastic or neoprene-coated.



WRITE TODAY FOR BULLETIN B-57

Wire and Iron Products Inc.
1724 Sixteenth Street
Detroit 16, Michigan

▲ For more details circle NED-883 F9 on enclosed inquiry slip ▲

USE THIS NEW KIND OF DIAMOND CUT-OFF WHEEL

Gives narrower, smoother cuts on industry's toughest materials

...yet prices start at only $32.25

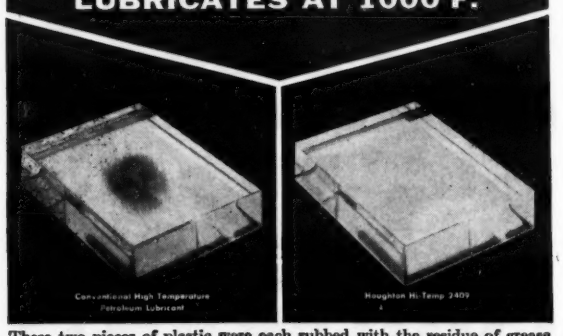
Now... at *production prices*... DIATRONIC gives you a rim width of .006" that's accurate to a maximum total tolerance of .0005"—or your money back. This accuracy is built in by a new process. No break-in needed. New narrow cut reduces sawdust loss 30%. A must for $3,000-a-pound silicon or germanium crystal. Cuts tungsten carbide, corundum, aluminum oxide, glass... practically anything. Stock orders shipped in hours; special wheels available. Write for literature, price list.

Another invention marketed by
NAVAN PRODUCTS, INC.
Subsidiary of North American Aviation, Inc.
Dept. 223, International Airport, Los Angeles 45, Cal.

DIATRONIC* DIAMOND WHEELS
"with built-in tolerance" *TRADEMARK

▲ For more details circle **NED-884 F9** on enclosed inquiry slip ▲

SCRATCH TEST PROVES NEW HI-TEMP 2409 LUBRICATES AT 1000°F.



These two pieces of plastic were each rubbed with the residue of grease after it had been exposed to a temperature of 1000°F.! The piece rubbed with *the lubricating residue of Hi-Temp 2409* is as clear as crystal! The piece rubbed with the hard, gritty residue of conventional high temperature grease is badly scratched.

This proves what happens to bearings that operate at temperatures from 600°F. to over 1000°F. With new Houghton Hi-Temp 2409 grease, bearing wear and breakdown due to inefficient lubrication is eliminated!

If you have a high temperature lubrication problem, call your Houghton Man for a demonstration or write E. F. Houghton & Co., 303 W. Lehigh Avenue, Philadelphia 33, Pennsylvania for your copy of Houghton's new booklet on "Thermal Lubrication".

HIGH TEMPERATURE LUBRICANTS
HI-TEMP 2409
HI-TEMP 100, 200, 300 SERIES OIL
COSMOLUBE 101 and 102
HOT FORGING AGENTS
DIE CASTING LUBRICANTS
PORCELAIN MOULD AIDS
products of ...

E. F. HOUGHTON & CO.
Ready to give you on-the-job service
Philadelphia, Pa. • Chicago, Ill. • Carrollton, Ga. Detroit, Mich. • San Francisco, Calif. • Toronto, Canada

▲ For more details circle **NED-885 F9** on enclosed inquiry slip ▲

TEST IT YOURSELF!

FREE block of MASONITE BENELEX!

You don't have to take our word for the cost-cutting properties of Masonite® Benelex®, the famous high-density laminate. Send for your free test block. Heft it; it's one-sixth the weight of steel. Work it in your own shop; it machines beautifully. What's more, we'll send you a free booklet giving all specifications and suggestions for use. Address Masonite Corporation, Dept. NED-6, Box 777, Chicago 90, Ill.

FREE BOOKLET SHOWS USES

MASONITE CORPORATION

®Masonite Corporation—manufacturer of quality panel products.

▲ For more details circle **NED-886 F9** on enclosed inquiry slip ▲

New Processes & Materials

COLD WATER PIPE COVERS prevent condensation drip

Condensation cannot occur on cold water pipes during humid seasons since the pipe surface is not exposed to the air when enclosed in Anti - Drip cold water pipe covers. Custom made covers will not become moldy. They are placed around the pipe, adjusted to length, and zipped closed. Standard decorator colors are available to match most decors and in sizes to fit ¾ and 1-in. pipe. Other sizes can be ordered. Made by **Zippertubing Co.**, 752 S. San Pedro St., Los Angeles 14, Calif.

▲ For more details circle **NED-887 F9** on enclosed inquiry slip ▲

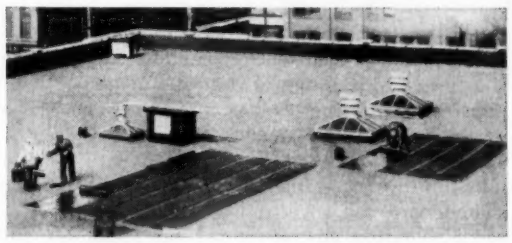
RUST INHIBITOR-LUBRICANT for metal, fabricated rubber parts

Stability of SS-4007 silicone grease remains constant in −75 to 300° F range. It will not solidify or oxidize, evaporate, or excessively bleed in this range. Product is a rust inhibitor and lubricant for mated, threaded, or nonthreaded ferrous components and fabricated rubber parts. It is used as a high and low temperature thread lubricant, corrosion preventive compound, and rubber lubricant for low and medium swelling components such as O-rings. Chemically inert grease is applied by brushing, wiping, and spraying (including aerosol spraying). Made by **General Electric Co.**, Silicone Products Dept., Waterford, N. Y.

▲ For more details circle **NED-888 F9** on enclosed inquiry slip ▲

ROOF COATING MATERIALS form watertight, seamless seal

Quick, permanent leak repairs can be made to built-up and metal roofs with Rooflex protective coating. Material is applied without heat and will withstand



water, smog, and chemical fumes. It forms a watertight, seamless seal from coping to coping. Material quickly forms a surface film, holding in retained oils to assure plasticity and the ability to move with expansion, contraction, and building sway. Formulated by **Flexrock Co.**, 3603 Filbert St., Philadelphia 1, Pa.

▲ For more details circle **NED-889 F9** on enclosed inquiry slip ▲

JOB-RATED WERNER ALUMINUM INDUSTRIAL PLATFORM LADDERS

Lighter, Stronger, Safer

WERNER Industrial Platform Ladders save effort because they are easier to handle — the big, roomy working platform provides greater safety and comfort — cuts time and labor costs. Rugged aircraft-type aluminum construction makes them ideal for heavy duty and a lifetime of maintenance-free service.

1. Non-sparking, non-magnetic
2. Wide, slip-resistant, reinforced platform and steps
3. Heavy duty, non-slip ribbed rubber feet
4. Accepted as "The Standard of the Industry"

Write for full specifications, prices and your nearest industrial distributor.

Underwriters' Laboratories, Inc. INSPECTED LADDER

WERNER
Dept. NE-6, P. O. Box 580, Greenville, Pa.

▲ For more details circle **NED-890 F9** on enclosed inquiry slip ▲

ECONOMY PROVED IN NATION'S TOP PLANTS:

(ATCO) HICKORY AISLE PAVING BLOCKS HAVE BEEN PROVED BY SOME OF THE NATION'S LEADING PRODUCERS! THEY SAVE MONEY:

- Last from four to five times longer than blocks of softer woods.
- Eliminates frequent replacement labor costs.
- Less production inconvenience due to longer life.
- Made to your exact size specifications.
- Made exclusively from hickory-pecan, toughest of all domestic woods.
- Laminated under hydraulic pressure.

Write for full information...

ANDERSON-TULLY CO.
"70 Years of Success!"
1240 NORTH SECOND STREET • MEMPHIS, TENNESSEE

▲ For more details circle **NED-891 F9** on enclosed inquiry slip ▲

If you have a tough application for a bronze metal Johnson's ALUMINUM BRONZE bars are the answer

Quality **Johnson Aluminum Bronze Bars** are ideal for giving trouble-free performance in such applications as gears, worms and worm wheels, bearings and many others.

Johnson's quality solid aluminum bronze bars are supplied with extruded finish. Centrifugally cast tubular bars are semi-finished and machined on the ID and OD. *Both* bars are supplied in standard 12½-inch lengths and in 97 sizes up to 8-inch OD.

All 97 sizes regularly carried in stock for both solid and tubular bars assures immediate delivery. Write for catalog. Or, better yet, contact your Johnson distributor today.

Johnson Bronze JOHNSON Bearings
580 South Mill Street • New Castle, Pa.
Subsidiary: Apex Bronze Co., Oakland, Cal.

▲ For more details circle **NED-892 F9** on enclosed inquiry slip ▲

ALLENAIR CORP.
(THE LARGEST MANUFACTURER OF CYLINDERS IN MINEOLA)
DOUBLES PRODUCTION

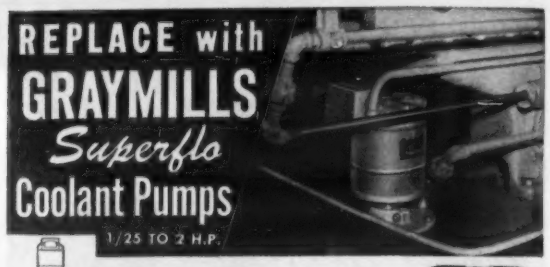
Using their own products helped a lot, but working 16 hours a day was the only answer.

AIR CYLINDERS
AIR VALVES
INDEXING TABLES
AIR CLAMPS

ASK FOR OUR NEW CATALOG
Write Before Next Tuesday!

NED-6
ALLENAIR CORP. 255 EAST 2nd ST., MINEOLA, N. Y.
Name .....
Company .....
Address .....
City ..... Zone ..... State .....

▲ For more details circle **NED-893 F9** on enclosed inquiry slip ▲



You'll get...

★ Smooth, quiet performance
★ Better appearance
★ Better design

AT LESS COST

AVAILABLE TO JIC STANDARDS

Specify these Superflo immersion type coolant pumps for replacement and original equipment. 36 models in various lengths. Abrasive proof, top rated motors, simplified mounting and electrical connections, greater pumping efficiency at less cost, plus COMPLETE interchangeability with other makes.

Designed and priced for Machine Builders' use.

154

Send for new catalog—with interchangeability tables

GRAYMILLS CORPORATION
3717 N. LINCOLN AVE. CHICAGO 13, ILLINOIS

WEST COAST: 4312 W. Pico Blvd. • Los Angeles 19 • WE 8-2351

For more details circle NED-897 F9 on enclosed inquiry slip

The SKIPJACK was built for the Navy by General Dynamics Corporation, Electric Boat Division.

quiet...

Newest and fastest of the Navy's fabulous nuclear submarines is the SKIPJACK, designed to carry out underwater missions in utmost silence. That is why the hushed quietness of Hoover quality ball bearings makes them the first choice for critical applications. Precision-made with super-smooth *Hoover Honed* raceways and perfectly matched sets of *Micro-Velvet* balls, Hoover ball bearings contribute to the quiet, enduring performance of a wide range of products.

Hoover Honed and *Micro-Velvet* are Hoover Trademarks.

hoover

BALL AND BEARING COMPANY
5400 South State Road, Ann Arbor, Michigan

Sales Offices and Warehouses: 2020 South Figueroa, Los Angeles 7, California; 290 Lodi Street, Hackensack, New Jersey

Hoover Ball and Bearing Company
5400 South State Road, Ann Arbor, Michigan

Please send new Bulletin 110 which describes Hoover's full line of quality deep-groove ball bearings.

Name_____
Title_____
Company_____
Address_____
City_____ Zone____ State____

For more details circle NED-898 F9 on enclosed inquiry slip

New Literature & Catalogs

Blueprint Filing Systems

Plan Hold Corp.—New and improved vertical and roll type blueprint filing systems are included in latest 12-page Catalog 4-59. Files are offered in modular sizes for storing plans, maps, drawings, and large sheets, as well as small plates, negatives, and stencils.

For more details circle NED-899 F9 on enclosed inquiry slip

Pressure-Sensitive Markers

W. H. Brady Co.—Twenty of the most common pressure-sensitive materials used for marking, labeling, sealing, and holding products and components are reviewed in 12-page Bulletin 132-A. It shows case histories of special markers. Technical data on many tapes are charted to simplify correct specification of self-sticking material.

For more details circle NED-900 F9 on enclosed inquiry slip

Continuous Grinding Gages

Federal Products Corp.—16-page Catalog 59A on continuous grinding gages features a miniature OD gage for diameters below ½ in., a king-size OD gage for diameters over 20 in., and a unit for continuously measuring inside diameter while grinding. Several pages are devoted to gage components which are interchangeable on most models.

For more details circle NED-901 F9 on enclosed inquiry slip

Small Punch Presses

Kenco Mfg. Co.—Features that make Kenco Electro-Safe punch presses among the surest and safest for uninterrupted production of stampings are pointed up in 4-page folder. Presses are built in 5, 8, 12, 15, 18, 21, and 26-ton capacities. Specifications and dimensions are tabulated.

For more details circle NED-902 F9 on enclosed inquiry slip

Mercury Switches for Every Need

Minneapolis-Honeywell Regulator Co., Micro Switch Div.—Revised 12-page Catalog 90b contains engineering drawings, ratings, application suggestions, and technical data on Honeywell mercury switches which can be actuated by various tilting mechanisms. Types and sizes are available for uses ranging from simple door interlocks to intricate space craft guidance systems. These hermetically sealed elements afford long, trouble-free life for a wide range of control functions.

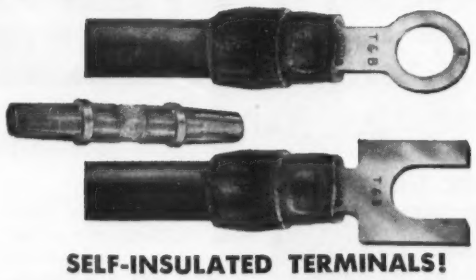
For more details circle NED-903 F9 on enclosed inquiry slip

Switchboard Instruments

Roller-Smith, Inc.—Instruments expressly designed for switchboard use covered by 24-page Catalog 4220 include alternating and direct current ammeters, milliammeters, voltmeters, wattmeters, temperature indicators, and many others. All essential information to aid in design and engineering is given, and construction features are shown. Accessories for use with instruments as well as complete prices are included.

For more details circle NED-904 F9 on enclosed inquiry slip

SPECIFY STA-KON®



SELF-INSULATED TERMINALS!

Take advantage of
- *lowest installed cost*
- *pressure-connector permanence*
- *self-insulated safety*

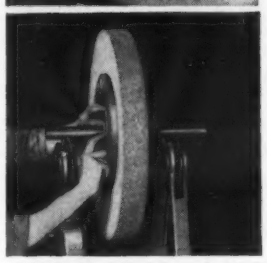
This complete line of self-insulated Sta-kon terminals gives you positive assurance against accidental contact by adjacent terminals. Easier-than-ever to install, they provide highly conductive joints . . . large contact areas . . . tough, stable Nylon insulation . . . and a permanent, vise-like grip on the conductor. Color-coded by size for instant identification. Three sizes of terminals will accommodate #22 through #10 AWG sizes. Available in ring and fork tongues, as well as special styles. Write for our NEW Bulletin 82, showing the complete line of Sta-kon terminals, connectors and installing tools.

THE THOMAS & BETTS CO.
INCORPORATED
24 Butler Street, Elizabeth 1, New Jersey
THOMAS & BETTS LTD., Montreal, P. Q., Canada

AUTHORIZED DISTRIBUTOR T&B ENGINEERED

For more details circle NED-905 F9 on enclosed inquiry slip

Check balance and runout accurately with Sundstrand accessories



Check Runout Within .0001" Limits on gears, sprockets, pinions, etc. Sundstrand "one-hand control" over all moveable elements leaves other hand free to control rotation of part. Standard bench centers in ten sizes range from 6" x 18" to 24" x 72".

Balance Grinding Wheels, Flywheels, Pulleys, etc., quickly and precisely on any of nine standard sizes of Sundstrand balancing tools. All but No. 5 extra-heavy duty size are portable, can be placed where needed without leveling. Capacities range from 12 to 24,000 lb. No limit on "swings" or distance between centers.

DISTRIBUTORS:
Sundstrand Bench Centers and Balancing Tools offer attractive sales opportunities. Investigate. Details on request.

SUNDSTRAND-American BROACH
DIVISION OF SUNDSTRAND CORPORATION
ANN ARBOR, MICHIGAN

For more details circle NED-906 F9 on enclosed inquiry slip.

HEAT BOUNCES BACK OFF ROOFS

protected by Tropical's

COOLERANT!

Bright, non-staining Coolerant, easily brushed or rolled on commercial or industrial roofs, deflects up to 70% of the sun's radiant heat. It reduces below-roof heat up to 26°—you can feel the difference AT ONCE! Reduces air-conditioning load. Prevents summer dry-out, adds years to roof life. Increases winter heating efficiency. Anyone can apply it.

OUR 76th YEAR

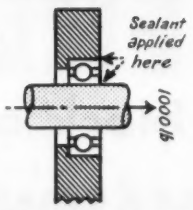
FREE! Complete details sent at once. Beat the heat this summer with Coolerant. Write now!

TROPICAL PAINT COMPANY
1124-1270 W. 70th, Cleveland 2, Ohio
HEAVY-DUTY MAINTENANCE PAINTS SINCE 1883 • SUBSIDIARY OF PARKER RUST PROOF COMPANY

For more details circle NED-907 F9 on enclosed inquiry slip

Edwin F. Oblinger, Chief Engineer, Parker Sweeper Co., says:

"WE THREW OUT PRESS FITS FOR BEARINGS...



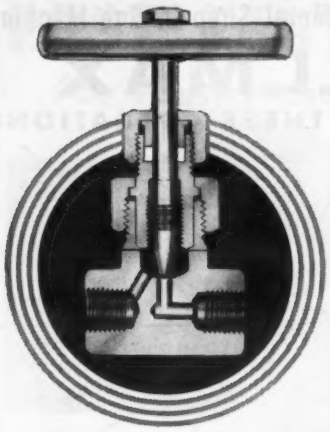
We used interference fits to prevent bearing races from turning in the gear box of our 4HP Turbosweeper. Maintaining close tolerances was a constant headache. If the fit was loose, the race would slip and fret; if the fit was tight, the race would deform shortening bearing life. Now LOCTITE does away with press fits. We open tolerances almost .002" on shaft and housing and use a slip fit, filling the clearance with LOCTITE. The bearings are retained with a force equal to the customary interference fit . . . a load of over 1,000 pounds is needed to break the bond . . . but we've reduced rejected parts from 8% to less than 1% and reworked parts fell from 20% to 0! Field reports are excellent."

Loctite is a penetrating liquid that hardens into a strong, heat and oil-resistant bond between closely fitted metal parts. Loctite eliminates the need for interference fits on bearings, sleeves, shafts and studs . . . locks nuts to bolts, seals pipe and tubing joints. Write today for information and sample.

LOCTITE® SEALANT

AMERICAN SEALANTS CO. 229 Woodbine St., Hartford 6, Conn.
In Canada: J. S. Parkes & Co., Ltd., Montreal
Stocked by bearing and industrial distributors

For more details circle NED-908 F9 on enclosed inquiry slip



SOLVE YOUR METER MANIFOLD AND CORROSIVE FIELD SERVICE PROBLEMS

AMERICAN® NEEDLE VALVES

Teflon-packed forged steel American Needle Valves eliminate gland leaks, deliver dependable service under the toughest conditions. Stainless or carbon steel precision machined valve bodies are ideally suited for welding. Stainless steel centerless-ground valve stem design makes it simple to repack valves under pressure.

Standard valves design rated for pressures to 5,000 psi at 70°F. Upon request, assembled valves are hydrostatically tested to 10,000 psi (twice rated working pressure) and are individually inspected. Valves also furnished with graphite-impregnated asbestos packing for temperatures above 450°F.

Angle or straight patterns—screwed or union bonnets.

Your American Meter representative will give you full details.

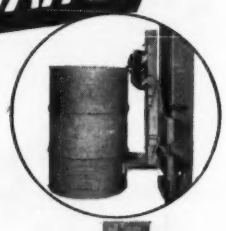
AMERICAN® METER COMPANY (INCORPORATED ESTABLISHED 1836)

General Offices: Philadelphia 16, Pa.

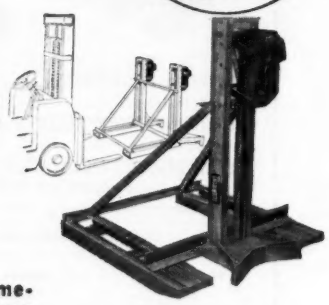
Sales Offices in Principal Cities

▲ For more details circle NED-909 F9 on enclosed inquiry slip ▲

USE THE LIFT-O-MATIC POWER TRUCK ATTACHMENT



for HANDLING DRUMS with a POWER FORK TRUCK WITH FORKS LEFT ON OR REMOVED



Simple, automatic, mechanical handling of any size or type of drum—single or multiple.

WRITE FOR CATALOG

MARVEL INDUSTRIES, Inc.
2246 CLEVELAND ST., EVANSTON, ILLINOIS

▲ For more details circle NED-910 F9 on enclosed inquiry slip ▲

New Processes & Materials

RUBBER PIPE SECTIONS absorb water line hammer and noises

Water pipeline noises emanating from the equipment to which the pipe is attached are absorbed by Vibraflex wire-reinforced, flexible rubber pipe sections. Flexibility

also overcomes alignment and installation problems. They can be used in systems conducting corrosive chemicals and abrasive materials where working pressures do not exceed 250 psi and temperatures remain under 180° F. Inside diameters range from 2 to 14 in. and lengths from 24 to 60 in. Units have full-faced molded rubber and duck flanges backed by split steel or solid steel-retaining rings. Made by **Mercer Rubber Co.**, Hamilton Square, N. J.

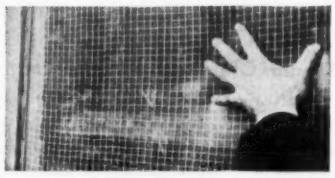
▲ For more details circle NED-912 F9 on enclosed inquiry slip ▲

WROUGHT IRON has good impact properties

Tubular and flat rolled forms are available in Mn Wrought Iron, principal alloying element of which is manganese. It possesses good impact and low temperature properties and is suited for use in services where the possibility of brittle failure exists. The highly deoxidized wrought iron, with lowered phosphorous and carbon content, has the high corrosion resistance, weldability, and working properties of 4-D wrought iron. Made by **A. M. Byers Co.**, Clark Bldg., Pittsburgh 22, Pa.

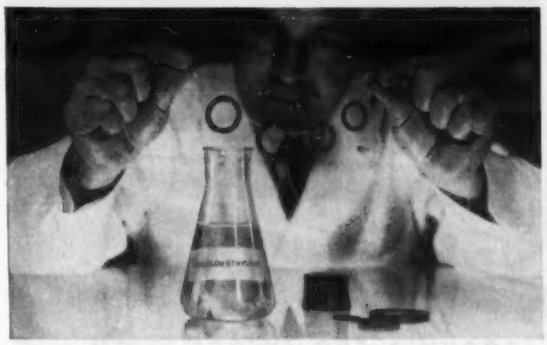
▲ For more details circle NED-913 F9 on enclosed inquiry slip ▲

REINFORCED PLASTIC FILM will not stretch, resists tearing



Reinforced with glass fiber threads, Ger - Pak polyethylene film will not stretch or become baggy and resists rips and tears. The glass fibers prevent a small puncture from spreading. The barrier film is light in weight, low in cost, easy to handle, and can be re-used. It can be used for equipment covers, temporary windows, closing-in during construction, and for other uses. Film is supplied in 2 x 2 and 4 x 4 mesh (2 and 4 squares per lineal inch) in 4 and 8-mil thicknesses in 100 and 150-ft long rolls. All sizes are offered in clear and black (sunlight resistant). Made by **Gering Products, Inc.**, N. Seventh Street & Monroe Avenue, Kenilworth, N. J.

▲ For more details circle NED-914 F9 on enclosed inquiry slip ▲



NEW GARLOCK VITON* RUBBER PARTS OFFER YOU LOW SWELL IN SOLVENTS, RESISTANCE TO 600° F

In the test illustrated, two rings of VITON and two O-rings of ordinary Nitrile rubber were immersed in trichlorethylene; VITON (right) retained its original dimension—the Nitrile rubber (left) swelled almost 50%. When oven aged in air at 600° F for 24 hours, and at 400° F for 2400 hours, VITON retains its excellent mechanical properties and remains usefully elastic. Widely used on jets and missiles, Garlock's new VITON is finding important civilian uses as valve stem seals on truck engines, pump seals on automatic transmissions, and on gasoline pumps, thermostat bellows and domestic washing machines. Also available as sealing elements on Klozure† Oil Seals, flexible members in Mechanipak† Mechanical Seals, "O" Rings, Cups, Chevron† Packing. See your local Garlock representative, or write for further information.

*DuPont Trademark †Registered Trademark

THE GARLOCK PACKING COMPANY, Palmyra, N. Y.
For prompt service, contact one of our 26 sales offices and warehouses throughout the U. S. and Canada.

GARLOCK

Packings, Gaskets, Oil Seals, Mechanical Seals, Molded and Extruded Rubber, Plastic Products

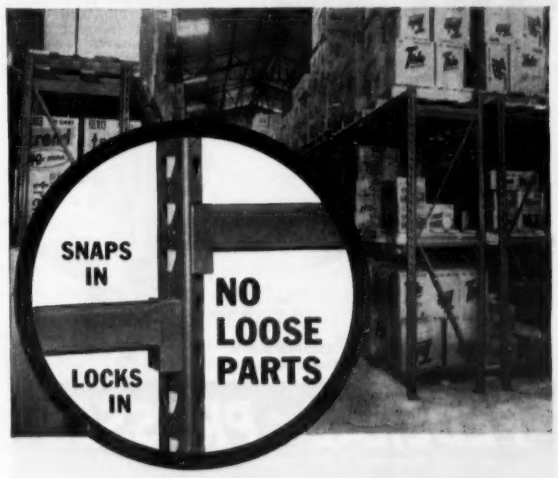
Canadian Division: The Garlock Packing Co. of Canada Ltd. • Plastics Division: United States Gasket Company

▲ For more details circle NED-915 F9 on enclosed inquiry slip ▲

Fast!

EMI air-row head

Fully Adjustable Pallet RACKS



- EASY TO ERECT
- ONLY 2 BASIC PARTS
- SIMPLE TO ADJUST
- QUICK TO RELOCATE

EMI AIR-ROW Head Racks easily adjust to stack pallets, skids, dies and bulk of varying heights. Upright frames are tied together with sturdy steel support beams which quickly snap into AIR-ROW slots in the vertical post. Forge lock fittings on the ends of the support beams insure positive self-locking engagement with no sway or pop-out.

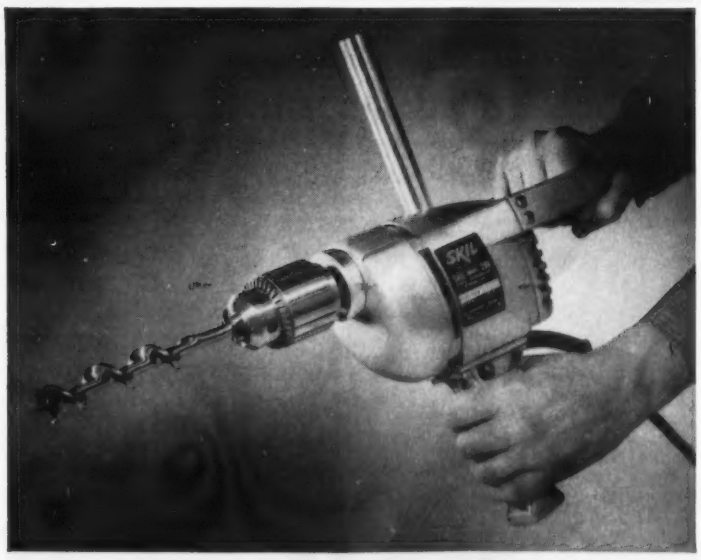
WRITE FOR OUR COMPLETE CATALOG!

EQUIPMENT MFG. INC.
21566 HOOVER ROAD
DETROIT 5, MICHIGAN

▲ For more details circle NED-916 F9 on enclosed inquiry slip ▲

NEW LOW COST SKIL 1/2" REVERSING DRILL

WITH A CHUCK THAT WON'T TWIST OFF!



Now, a low cost reversing drill with a chuck that's *guaranteed not to slip*. It's pressed on a tapered spindle, then locked on *to stay on!*

And this standard duty model 290 SKIL Reversing Drill gives you plenty of other important job features too, including—

- **Light weight—actually almost 6 lbs. lighter** than competitive ½" drills.
- **Rear and pipe handles detach** for close quarter drilling.
- **Safety Reversing Switch** makes it impossible to accidentally reverse the drill.

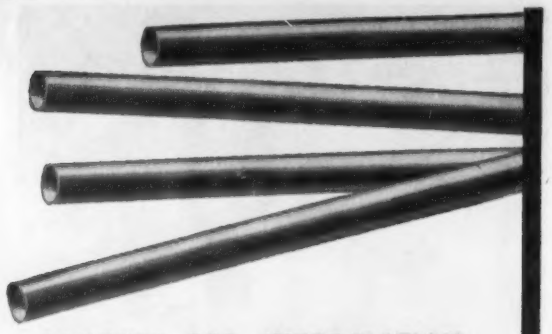
Your SKIL distributor will let you try one so you can see how well it works—and keeps on working—in forward and reverse. Call him.

Write us or ask your distributor for a copy of the 58 page SKIL Industrial Power Tool Catalog containing detailed information on the new ½" Reversing Drill and more than 100 other SKIL Industrial Tools.

SKIL

SKIL CORPORATION
5033 Elston Ave., Chicago, Illinois
3601 Dundas St., W., Toronto 9, Ont.

▲ For more details circle NED-911 F9 on enclosed inquiry slip ▲



LOOKING FOR INFORMATION ON ALUMINUM TUBE?

WRITE FOR

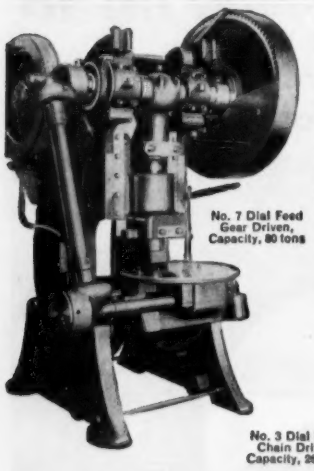
WOLVERINE TUBE
DIVISION OF
CALUMET & HECLA, INC.
17272 Southfield Road
Allen Park, Michigan
Manufacturers of Quality-Controlled Tubing and Extruded Aluminum Shapes

▲ For more details circle NED-917 F9 on enclosed inquiry slip ▲

Modern FEDERAL Dial Feeds give you

automation at less cost!

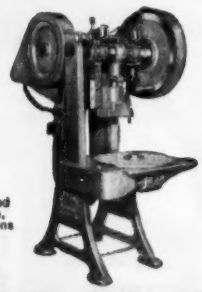
—eliminate specialized, more costly equipment!



Federal Dial Feeds are your answer to greater production at lower costs. Equipped with special jigging, automatic feeds and ejectors, their applications are virtually unlimited and the need for specialized, more costly equipment is often eliminated. (One manufacturer increased production 600%.)

Add Federal's quality features and workmanship...and you've got a winner. Gear or chain driven with cam-type indexing mechanisms. Sizes 6 to 80 tons.

No. 7 Dial Feed Gear Driven, Capacity, 80 tons



No. 3 Dial Feed Chain Driven, Capacity, 25 tons

FEDERAL PRESS COMPANY
906 Division St., Elkhart, Indiana

FEDERAL DIAL FEED PRESSES
33 Years' Experience in Dial Feed Engineering and Construction

▲ For more details circle NED-918 F9 on enclosed inquiry slip ▲

RCA RADIO . . FIRST CHOICE OF THE LEADERS

Get latest facts about 2-Way Radio for Industrial use

Mail coupon for complete information on RCA Mobile and Personal Radio Equipment

RADIO CORPORATION OF AMERICA, Communications Products Dept. U-329, Building 15-1, Camden, N.J. In Canada: RCA VICTOR Company Limited, Montreal

Please send me complete information, as follows:
- ☐ RCA Personalfone transistorized receiver and transmitter (shown above)
- ☐ "Split Channel" Carfone Mobile equipment—all bands
- ☐ "Quiet Channel" to effectively cut out all channel interference
- ☐ Folder—"Sherwin-Williams Solves Tough Materials Handling Problems with RCA 2-Way Radio"

NAME _____ TITLE _____
COMPANY _____
ADDRESS _____
CITY _____ ZONE _____ STATE _____

RADIO CORPORATION of AMERICA
COMMUNICATIONS PRODUCTS • CAMDEN, N.J.

▲ For more details circle NED-919 F9 on enclosed inquiry slip ▲

New Literature & Catalogs

Fence Gate Operators

Robot Industries Inc.—Details of a series of gate operators for single and double sliding and swinging fence gates and vertical lift gates are presented in series of illustrated data sheets. Ten different remote controls are offered.

▲ For more details circle NED-920 F9 on enclosed inquiry slip ▲

Automatic Valve Wall Chart

A. W. Cash Valve Mfg. Corp.—Reference data on company's varied line of Hydronic heating controls, relief valves, pressure regulators, and safety devices are found on 12 x 18-in. wall chart. Four new valve series are covered.

▲ For more details circle NED-921 F9 on enclosed inquiry slip ▲

Open-End V-Belts

Flexible Steel Lacing Co.—"Custom Made V-Belts with Alligator V-Belt Fasteners" is the informative 6-page illustrated Bulletin V-227 which offers data on the use of these fasteners with open-end belting. How to determine belt lengths is covered, and replacement charts for endless V-belts are included.

▲ For more details circle NED-922 F9 on enclosed inquiry slip ▲

Screw Conveyor Drives

Dodge Mfg. Corp.—Compact screw conveyor drive with speed reducer, packing gland, and drive shaft, all of which mount as a unit on a trough end, is described and illustrated in 16-page Bulletin A667C. Ratios offered are 18:1, 8:1, and 3:1. Prices and selection data are included, as are specifications.

▲ For more details circle NED-923 F9 on enclosed inquiry slip ▲

Parts for Jigs, Fixtures & Machines

Northwestern Tools, Inc.—Over 500 components for jigs, fixtures, and special machines as well as 250 clamping items make up content of 16-page catalog. Included are full-scale tracing templates of the jig and fixture parts to aid in engineering.

▲ For more details circle NED-924 F9 on enclosed inquiry slip ▲

Steam Cleaners for Industry

Turbo Machine Co.—Both electric and oil-fired models are included in the new industrial steam cleaners described in 6-page Bulletin 11-58. These machines afford an economical means for production cleaning, paint stripping, phosphatizing, and other operations in all types of industries. They are mobile and easy to use.

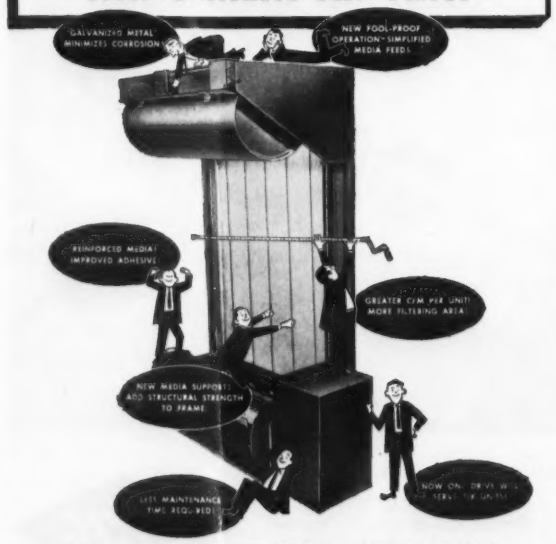
▲ For more details circle NED-925 F9 on enclosed inquiry slip ▲

Industrial & Motor Controls

B/W Controller Corp.—Magnetic contactors, starters, and reversing contactors are among the industrial and motor controls described in 16-page catalog. Sections are included on multiple pump controls, overload heater tables, and overload relays.

▲ For more details circle NED-926 F9 on enclosed inquiry slip ▲

NEW AAF Model B Roll-O-Matic Air Filter



WRITE TODAY FOR ROLL-O-MATIC BULLETIN 248-C1

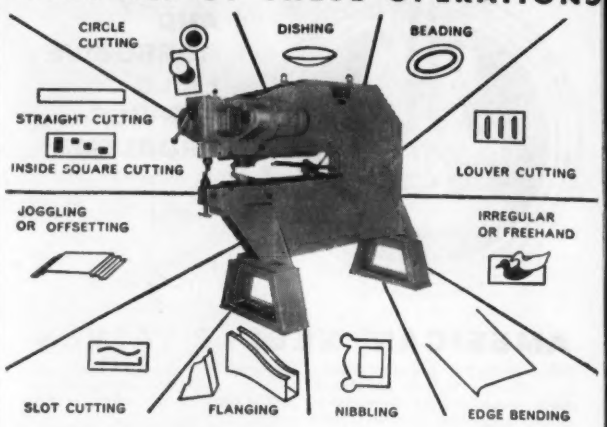
AAF American Air Filter COMPANY, INC.
391 Central Avenue, Louisville 8, Kentucky
American Air Filter of Canada, Ltd., Montreal, P. Q.

▲ For more details circle NED-927 F9 on enclosed inquiry slip ▲

A Complete Sheet Metal Shop in One Machine

PULLMAX

DOES ALL OF THESE OPERATIONS



★ CUTS MILD STEEL UP TO 11/32"

The one machine that's sure to save time, labor and material when you work sheet or plate. Eliminates expensive die costs—easy to operate. 7 sizes to choose from.

Write for a demonstration right in your plant.

16 m.m. Sound Film available

Write for free catalog on Metalworking Ideas.

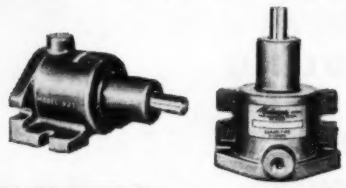
AMERICAN PULLMAX CO., INC.
2457 N. Sheffield Ave., Chicago 14, Illinois

▲ For more details circle NED-928 F9 on enclosed inquiry slip ▲

Modernair

CLAMP-TYPE AIR CYLINDERS

Easiest to install or relocate!



UNIVERSAL MOUNTING for easy vertical or horizontal installation.

SLOTTED MOUNTING HOLES save installation, relocation time.

SPRING-RETURN TYPE CYLINDER operates from simple 3-way valve (MODERNAIR CRV or BV series recommended). Has 1/8" NPT port.

ECONOMICALLY PRICED, TOO!

Price (f.o.b. factory)

Bore Size	1" Stroke	2" Stroke
1⅛"	$ 8.50	$ 9.75
2"	16.00	19.00
3"	23.50	26.50

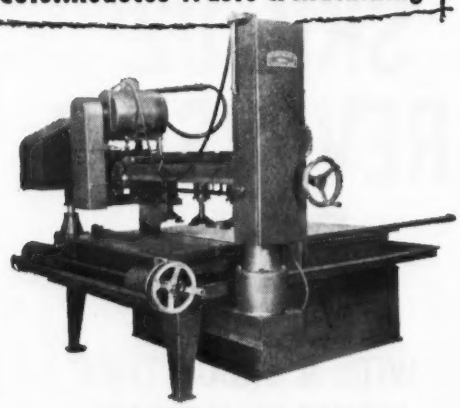
Write TODAY for Free Literature!

9-R

Modernair CORPORATION
Dept. F6, 400 PREDA ST., SAN LEANDRO, CALIF.
5007 Brookpark Rd., Cleveland 34, Ohio

▲ For more details circle NED-929 F9 on enclosed inquiry slip ▲

Precision Saw With Air Clamps Makes Clean Cuts..Reduces Waste & Machining



With this new Ty-Sa-Man 144-BD Saw, adjustable air clamps hold metal down while the saw travels down the machined transverse rail, delivering cuts with smooth edges to amazing tolerances. Cut parallel strips . . . handle difficult jig fixture work with this self-contained saw which has its own integral cooling system and tank. Among its features are a calibrated guide fence, infinite variable speed from zero to twenty FPM, push-button control and 15 HP motor.

FREE BROCHURE
TY-SA-MAN Machine Co., Inc.
550 White Ave., Knoxville, Tenn.

▲ For more details circle NED-930 F9 on enclosed inquiry slip ▲

FAST FASTENERS
for faster production

EATON-RELIANCE KEPS®

PREASSEMBLED NUTS AND TOOTH TYPE WASHERS

SEND FOR DESCRIPTIVE LITERATURE

EATON — RELIANCE DIVISION — MANUFACTURING COMPANY
509 CHARLES AVE. • MASSILLON, OHIO

SALES OFFICES: NEW YORK • CLEVELAND • DETROIT
CHICAGO • ST. LOUIS • SAN FRANCISCO • LOS ANGELES

▲ For more details circle NED-931 F9 on enclosed inquiry slip ▲

PRESSURE SENSITIVE TRANSFER FILM

An instant bonding medium for the temporary or permanent bonding of a full variety of porous and non-porous materials. Double-Face is a translucent adhesive film reinforced by a non-woven tissue and supported for shipping handling and storage by a release-coated protective paper. More versatile than a single or double coated tape.

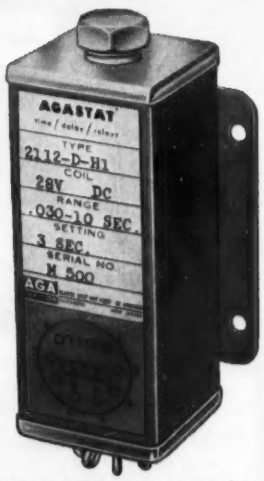
- 72 linear yard rolls in widths ⅛" up to 54"
- Conforms to irregular surfaces
- Permits better bond of porous surfaces
- Can be slit or die cut with release paper in place
- High-speed applicator available
- Dry-edge release paper available in some widths

Write for free literature and sample.

ANGIER ADHESIVES
INTERCHEMICAL CORPORATION
Finishes Division
120 Potter St., Cambridge 42, Mass. Midwestern Plant: Huntington, Indiana

▲ For more details circle NED-932 F9 on enclosed inquiry slip ▲

NOW!



MINIATURE AGASTAT®

time/delay/relay

MEASURES ONLY 4"x1½"x1½"

The Miniature Agastat time delay relay is a space-saving answer to aircraft, missile and computer problems. You get all these valuable features in one small package:

- Easily adjusted timing ranges as short as .030 seconds.
- Repeat accuracy of ± 5%.
- Time delay on energizing or de-energizing.
- For DC or AC operation.
- Hermetically sealed or dust-proof housings.

Write today for the full details on the new miniature Agastat. Dept. A36-65.

AGA DIVISION — ELASTIC STOP NUT CORPORATION OF AMERICA
1027 Newark Avenue, Elizabeth, N. J.

Gasaccumulator Co., (Canada) Ltd., 12 Gower Street, Toronto 16, Ontario

▲ For more details circle NED-933 F9 on enclosed inquiry slip ▲

New Processes & Materials

HEAT-REFLECTING ROOFING
coating contains aluminum flakes

A permanently colorful, insulating, heat-reflecting surface can be applied to metal, asphalt, masonry, or stucco roofs and siding with King RE-3 paint-it-on roof coating. Metallic aluminum flake leafs to form a continuous reflective barrier over the asphalt or asbestos fibrated mastic. Coating can also be spray applied, and it provides a long-lasting waterproof weather-resistant surface. Six colors offered are blue, green, gray, gold, frost, and aluminum. Made by **Wilbur & Williams Co.**, King Div., 650 Pleasant St., Norwood, Mass.

▲ For more details circle NED-934 F9 on enclosed inquiry slip ▲

PHOSPHORESCENT PAINTS
charged during day to glow in dark

Fire extinguishers, first aid cabinets, light switches, and stair treads are among the many products that can be made visible in the dark by finishing them with phosphorescent paints. These nonradioactive paints charge themselves from natural or artificial light so that they can glow in the dark. Baking type for use on metal surfaces and air dry type for wood, paper, plastics, and plaster have good gloss retention and will reactivate themselves indefinitely. White primer undercoat and clear finishing varnish are recommended for best results. Made by **Ultra-Violet Products, Inc.**, Walnut Grove Avenue at Grand, San Gabriel, Calif.

▲ For more details circle NED-935 F9 on enclosed inquiry slip ▲

CLEAR CASTING RESIN
for imbedding products, specimens

Crystal clear Cadco polyester casting resin for either casting of prototypes, or embedment of products, documents, and scientific specimens hardens in 45 min at room temperature and in 25 min at 150° F. No pressure is required. Molds can be of any smooth, nonporous material, either rigid or flexible. Castings of Cadco resin are shatter-resistant, do not soften with heat, and can be exposed intermittently to 350° F. Made by **Cadillac Plastic & Chemical Co.**, 15111 Second Ave., Detroit 3, Mich.

▲ For more details circle NED-936 F9 on enclosed inquiry slip ▲

Save Time and Money with this DINGS Portable Magnetic Separator

Ideal for:

Scrap Separation, Tumbling Barrel Applications

Just wheel this new Dings TBS all-purpose Magnetic Separator right up to the job! Quality of separation and product purity are improved because feed rate can be controlled and magnetic intensity adjusted.

HERE'S HOW IT WORKS

Dings TBS consists of a portable conveyor, hopper with adjustable gate, vibrating feeder, and a Self-Cleaning Perma-Plate Magnet. An even layer of material is fed to the conveyor, and as it passes under the magnet, iron is lifted to the moving crossbelt and discharged to one side.

New Dings TBS units are completely field tested for effective performance. Write for details in Bulletin 1215-A.

Dings
DINGS MAGNETIC SEPARATOR CO.
4758 W. Electric Ave., Milwaukee 46, Wis.
TBS—159 ¼

▲ For more details circle NED-937 F9 on enclosed inquiry slip ▲

NEW IDEAS
TO DOUBLE YOUR STORAGE CAPACITY

The FRICK-GALLAGHER MFG. CO.
117 S. MICHIGAN AVE., WELLSTON, OHIO J-3A
BONDERIZED STEEL EQUIPMENT FOR EVERY STORAGE NEED

▲ For more details circle NED-938 F9 on enclosed inquiry slip ▲

TO CUT PRODUCTION COSTS

You save money every time you handle parts with Nestier Boxes and Baskets. They stack when full, nest when empty. You need no racks, waste no storage space, require no other containers even for degreasing. Nestier units travel in stacks on pallets, conveyors or moving belts. Tiered on work tables or hung from Hopper Racks they put parts in easy reach of your assemblers. Nestiers are die-cut from sheet steel in 5 sizes, 12" to 36" long. Write for information today. Dept. D-6

NESTIER — FIRST IN SMALL PARTS HANDLING

NESTIER CORPORATION Subsidiary of THE METAL SPECIALTY CO.
4519 Este Ave., Cincinnati 32, Ohio

▲ For more details circle NED-939 F9 on enclosed inquiry slip ▲

No fumes, smoke, excess water . . . with NEW E-350 all electric Jenny®!

CLEAN AND JENOLIZE

New electrically heated and powered Jenny is ideal for use wherever open flames, fumes, smoke, or excess water is objectionable or hazardous. The E-350 cuts costs of cleaning machinery parts or equipment for maintenance, repair or repainting by 60-80%!

And with the new Jenolizing process, machinery equipment and parts are left with a coating that protects against flash rusting and gives a glossy, like-new appearance to painted surfaces. Write today for complete facts about the all-new electric Jenny and Jenolizing.

hv HOMESTEAD VALVE MANUFACTURING COMPANY
Hypressure Jenny Division, P. O. Box 84, Coraopolis, Pa.

▲ For more details circle NED-940 F9 on enclosed inquiry slip ▲

▲ For more details circle NED-943 F9 on enclosed inquiry slip ▲

▲ For more details circle NED-944 F9 on enclosed inquiry slip ▲

New Literature & Catalogs

Self-Sticking Metallic Materials

Avery Label Co., Decorative Products Div.—Current uses for pressure-sensitive metallic materials in the design and decorating of products are listed in brochure. It contains swatches of available materials and a full size nameplate which shows material's ability to be die-cut, printed, and silk screened in any color, size, or shape.

▲ For more details circle NED-945 F9 on enclosed inquiry slip ▲

Formed Wire Products

Kaspar Wire Works—"Ideas in Wire" is title of 12-page brochure which shows a variety of formed wire products for use in food and apparel display, refrigeration, clothes racks, and other applications. Production activities are pictured along with some finishing ideas relative to wire products.

▲ For more details circle NED-946 F9 on enclosed inquiry slip ▲

Servo Motors

John Oster Mfg. Co., Avionic Div.—Basic models of the Oster line of precision servo motors in sizes 8 to 29, for scientific, military, and industrial applications, are described in 20-page Catalog 5000. Each model is covered as to dimensions, electrical and mechanical characteristics, and performance. Torque ratings at stall range from 0.18 to 23 oz-in.

▲ For more details circle NED-947 F9 on enclosed inquiry slip ▲

Communications Control Consoles

R. W. Neill Co.—Communications equipment control consoles described in 8-page brochure have modular type circuit assemblies for maximum flexibility. Cabinets for 12, 24, and 42 circuit assemblies are shown. Circuit assemblies are complete self-contained units with all components for the function required. Assemblies for each model are listed.

▲ For more details circle NED-948 F9 on enclosed inquiry slip ▲

Aircraft & Missile Accessories

Lyndon Aircraft, Inc.—After briefly covering Lyndon facilities and case histories, 26-page folder contains technical data sheets on eddy current dampers, magnetic brakes, rotary and linear actuators, and hydraulic control valves. This accessory equipment is designed for use in aircraft, missile, and space craft.

▲ For more details circle NED-949 F9 on enclosed inquiry slip ▲

Technical Documentation Service

Cook Electric Co.—"Documentation" discusses the capabilities and services offered by their new division, Cinefonics, Inc., to provide technical films for military and industry. How film is used under Table 210 for research and development contracts is explained. Company is able to meet the requirements for film communication in the most complex technologies. This portfolio describes various films that have been produced.

▲ For more details circle NED-950 F9 on enclosed inquiry slip ▲

▲ For more details circle NED-951 F9 on enclosed inquiry slip ▲

SPECIFY *GRANET*
COATED FABRIC WORK GLOVES

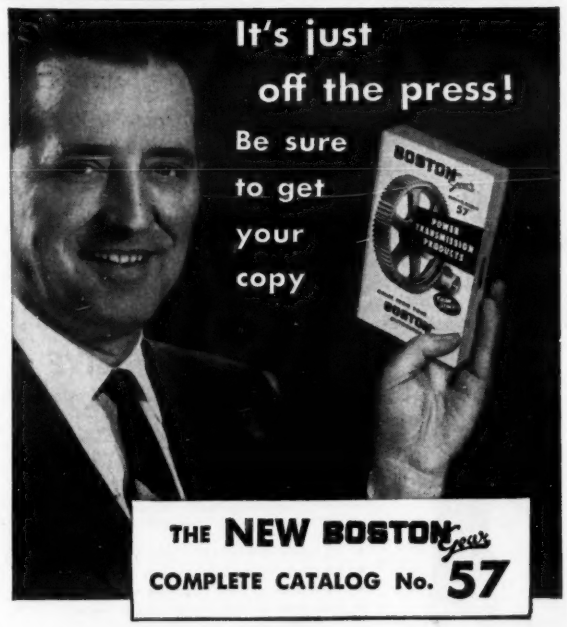
Nuisance hand injuries cost you money in so many ways. Cuts to hands and fingers mean higher insurance premiums — loss of production time — increased first aid cost — and poor employee relationships.

Granet Gloves are test-proven to give longer wear and greater protection than ordinary leather, canvas and plastic work gloves. Our **Controlled Glove Program** offers a practical and economical solution to hand injury problems.

Write today for descriptive catalog of all Granet lines. There's one for every industry.

GRANET CORPORATION
25 LORING DRIVE
FRAMINGHAM, MASSACHUSETTS

▲ For more details circle NED-952 F9 on enclosed inquiry slip ▲



NOW AVAILABLE AT
YOUR NEARBY BOSTON Gear DISTRIBUTOR

For nearest DISTRIBUTOR, look under "GEARS" in the "Yellow Pages"

▲ For more details circle NED-953 F9 on enclosed inquiry slip ▲

Save Time and Money on Stainless Semi or Automatic Inert Gas Arc Welding

Arcos Stainless Spooled Wire helps end a host of costly time-consuming welding problems. Its clean, uniform finish gives better conductivity and arc stability. Level-layer-wound reels feed smooth and easy. And Arcos quality—a byword in the industry—leads to improved performance . . . sounder, more uniform welds.

FREE STAINLESS APPLICATION CHART

Send today for this chart on Stainless Welding Rods and Bare Electrodes. Complete data including typical analysis information.

Arcos Corporation, 1500 S. 50th St., Philadelphia 43, Pa.

ARCOS | Filler Metal Specialists

▲ For more details circle NED-954 F9 on enclosed inquiry slip ▲

BUY DIRECT! SAVE AT PALLEY'S

NEW PALLEY HYDRAULIC CYLINDERS – Here are two of our newly developed line of double action industrial Hydraulic Cylinders. These cylinders are designed to meet the most rigid requirements of industry. All are heavy duty steel construction.

Type (A) is a heavy duty, press type cylinder with bores of 3", 5", 6" and 8" – thrust range up to 75 TONS at 3000 PSI.

Type (B) is an internal cap type cylinder with bores of 1½", 2", 2½", 3", 3½" and 4". Has strokes from 2" to 48". Delivers up to 18,850 lbs. thrust on 1500 PSI line pressure.

For complete listing of our tremendous stocks and prices – Send for our Special Hydraulics Catalog.

VICKERS HYDRAULIC ANGLE PUMPS

Save up to 50% on these Piston type, positive displacement Hydraulic Pumps. Made to top Government Specifications.

Part No.	G.P.M.	PSI	RPM	Price
H-P4A	5.3	1000	3000	$22.50
H-P5A	2.7	1500	3000	25.75
H-P4U	6	1000	3000	22.50

1500 PSI Double Action HYDRAULIC CYLINDER NEW

Good for clutch or throttle control when used as a master & slave. Has 5/8" bore, 4-1/8" stroke, 7/16" shaft, 9-5/8" closed length. 1/4" tube ports (7/16–20 thread).

No. H-60 ONLY . . . 3.75

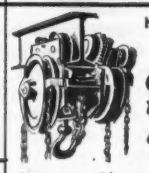
HYDRAULIC ACCUMULATORS

A 3000 PSI Bendix ball type Accumulator. Top condition.

No. H-5½ – Has 5-1/2" dia. . . $27.50
No. H-A7 – Has 7" diameter . . 32.50

2000 PSI Ball ACCUMULATORS

No. H-A5SU – Vickers. 10" dia. $24.50
No. H-A5A – 5½" dia. NEW . . . 15.75
No. H-A5AU – 5½" dia. Used . . 10.75



NEW 3-TON SPUR GEAR CHAIN HOIST 179.50

WORTH $300

Army type with spur geared block. Constructed of steel & malleable iron. Chain drive. Use wherever an overhead trolley hoist is needed. Will handle up to 3 TONS. Model 41. Made by Chester White Mfg. Weight: approx. 540 lbs. Unused, good cond.

GRAVITY CONVEYOR

Has 500 lb. per ft. cap. 12" wide curved steel frame. 5 rows of 2" diameter, 5/8" face, ball bearing steel wheels. Each unit will lock to next. Has 45° curve. NEW! 14.95

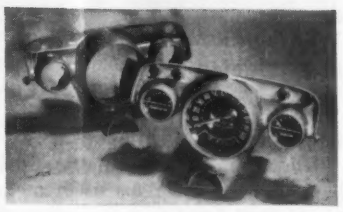
Pay by M.O. or Check. P.O.s accepted from D&B firms rated F2½ or better. 1/2 deposit with C.O.D.s. Prices F.O.B. Los Angeles Whse.

palley's 2263 E. Vernon Ave. Dept. NED-69, Los Angeles, Calif.

▲ For more details circle NED-955 F9 on enclosed inquiry slip ▲

New Processes & Materials

ACETAL RESIN PLASTIC extremely rigid, but not brittle, it can be molded or extruded

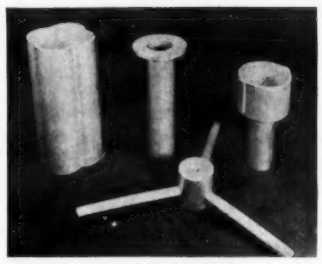


Automobile instrument clusters, gears, bearings, door handles, moving parts in cameras and appliances, industrial equipment components, plumbing fixtures, and many consumer products can be made from Delrin, a tough, rigid acetal resin. Expected to find widespread use in fields now utilizing die cast metals, the thermoplastic is extremely rigid, yet not brittle. Properties are retained under extremes of temperature and humidity, stress, and exposure to most solvents. Material is odorless, tasteless, and nontoxic.

Fabrication is by conventional methods on standard plastics processing equipment at mass production rates. It can also be screwed, nailed, sawed, drilled, machined, painted, metallized, and printed. Two compositions are offered for general purpose molding and for extrusion into tubing, sheeting, rod, etc. Ultimately 14 standard colors and 42 service colors will be offered. Commercially available from **E. I. du Pont de Nemours & Co.**, 1007 Market St., Wilmington 98, Del.

▲ For more details circle NED-958 F9 on enclosed inquiry slip ▲

ALUMINUM EXTRUSION TECHNIQUE forms hub with spokes or vanes in one impact from a cylindrical slug



Such complex shapes as spider-type faucet handles, or hubs with spokes or vanes emanating from the center are instantaneously formed from aluminum by lateral impact extrusion. Word "lateral" refers to the direction of metal flow which is outward at any angle from direction of impact stroke. A typical part is the three-spoked steering wheel center, shown in photo, which is produced in a cold operation from a cylindrical slug.

Technique produces wrought strength and close tolerances in the part, without porosity or brittleness. It is a modification of the impact process in which parts are produced as a result of metal flow up around a punch, down into a die, or a combination of these. Photo also shows typical impacts extruded by conventional methods. Technique developed by **Aluminum Co. of America**, 1501 Alcoa Bldg., Pittsburgh 19, Pa.

▲ For more details circle NED-959 F9 on enclosed inquiry slip ▲

Users tell the Speed-Patch story best with orders for more . . . year after year. Why not take advantage of the experience of others and make ready-mixed Speed Patch your standard floor repair. Sets immediately. Heavy loads truck over each patch without waiting.

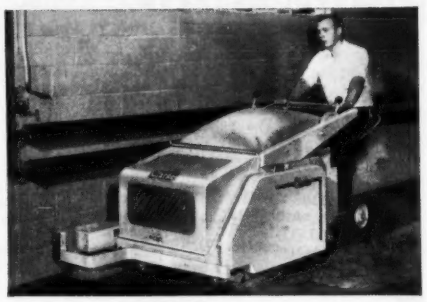
Write for Details

BER-TRED Corporation
Manufacturers of a Complete Line of Building Maintenance Materials
7440-7450 North St. Louis Avenue • Skokie, Illinois

▲ For more details circle NED-960 F9 on enclosed inquiry slip ▲

Clarke POWER SWEEPERS

–do the work of up to 20 men!
–cut sweeping costs up to 80%!



It's Clarke's newest addition to the nation's best known line of floor machines. It's built to sweep cleaner, faster and more dust-free than any other sweeping method. Picks up all types of debris, covers up to 50,000 sq. ft. per hour, sweeps right up to walls, maneuvers easily, slashes man hours and sweeping costs.

Write for new brochure. Better yet, ask your Clarke power sweeper distributor for an on-the-job demonstration.

CLARKE FLOOR MACHINE COMPANY
Formerly Clarke Sanding Machine Company
226 S. Clay Avenue, Muskegon, Mich.
Authorized Sales Representatives and Service Branches in Principal Cities. In Canada: Clarke Floor Machine Co., (Canada) Ltd., 21 Advance Rd., Toronto 18, Ontario

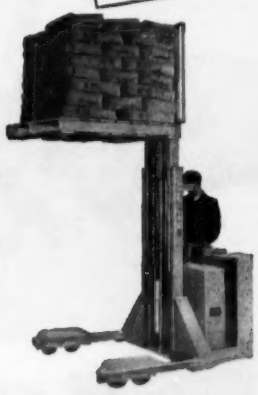
▲ For more details circle NED-956 F9 on enclosed inquiry slip ▲

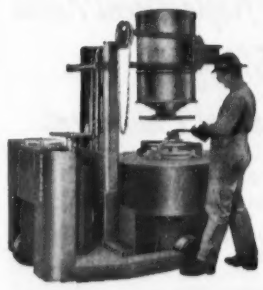
EXPLOSION PROOF
CLASS I GROUP D
POWERED LIFT TRUCKS

Underwriters' Laboratories, Inc. INSPECTED TYPE EX REVOLVATOR COMPANY

APPROVED and PROVEN 8 YEARS ON THE JOB

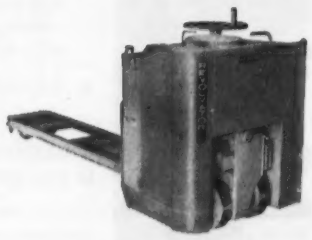
Since 1951 Revolvator Go-Getters, designed for this service, have been specifically approved by leading industrial insurance companies for use in Class I Group D explosion hazardous areas in major plants from coast to coast. User comments like those below show that the Go-Getter has been more than approved by safety authorities...it has been proven in use for eight years.





Air in the color mixing room of the finishing plant where the Go-Getter above is used carries organic dusts as well as explosive fumes. The foreman says, "The men like the Go-Getter and use it steadily."

The Plant Manager where the Go-Getter at the left is used says, "In an area where we have explosive fumes, aluminum chloride dust and hydrochloric acid fumes what was previously a difficult, disagreeable job for two men is now easy for one."



Executives in the chemical plant where the model to the right is used say, "We use the Go-Getter in our area which has the most severe hazard." Another plant where quantities of explosive solvents are used for "wash down" reports of a similar model, "We are well pleased and we are ordering another Go-Getter."

A major insurance association writes, "We are quite willing to accept the unit (Go-Getter) as it is designed with explosion proof housings for the motors and controls as usually specified for electrical equipment that can be safely used in explosion hazardous areas."

A nationally known safety engineer writes, ". . . calling the existence of this line of trucks to the attention of the industry as we believe many would want to know about this equipment."

The Go-Getter is the latest addition to a complete line of materials handling equipment for use in explosion hazardous areas that Revolvator has been building for over a quarter of a century.

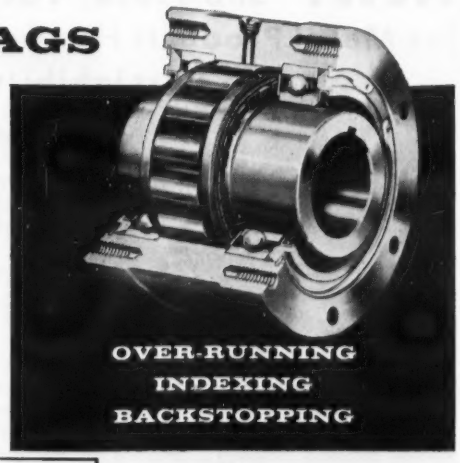
REVOLVATOR CO.
8732 TONNELE AVENUE, NORTH BERGEN, N. J.
SINCE 1904

▲ For more details circle NED-961 F9 on enclosed inquiry slip ▲

NEW HIGHER PERFORMANCE FORMSPRAG OVER-RUNNING CLUTCHES WITH FORMCHROME* SPRAGS

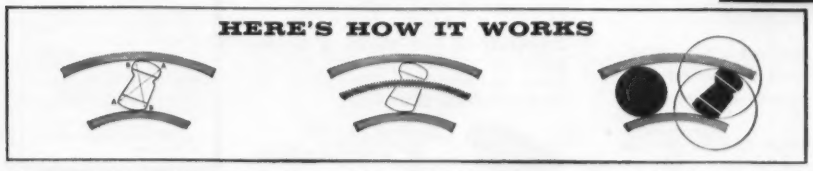
Greatest torque capacity for clutch size and weight, no measurable backlash, extreme precision and long trouble-free life have always been provided by Formsprag clutches. Now! The best over-running clutches provide even higher performance. For, they have Formchrome sprags that are corrosion resistant, and have high hardness and abrasion resistance similar to tungsten carbides. Result, sprag geometry is retained longer and clutches can be used on higher over-running speeds. For further information, send for technical paper "Formchrome Sprags". FORMSPRAG COMPANY, 23595 Hoover Road, Dept. 102, Warren (Detroit), Michigan.

*Formchrome sprags are produced under a patented process. The use of this process in the manufacture of over-running clutches is exclusive with Formsprag.



FORMSPRAG CLUTCHES
World's Largest Exclusive Manufacturers of Over-Running Clutches.

HERE'S HOW IT WORKS



Formsprag clutches have a full complement of sprags between concentric inner and outer races. Dimension AA is greater than BB. Rotation of one race in "driving" direction causes the sprags to wedge, transmitting full torque from one race to the other.

An energizing spring keeps the sprags in light contact with both races . . . there is thus no lost motion. When force is applied to the driving member, the driving torque is instantaneously transmitted between races, slippage or backlash is eliminated.

The sprag is, in effect, a "roller" of larger diameter having greater contact surface, and more sprags can be inserted within a given diameter for greater torque capacity. Also, sprags engage at constantly changing contact points to prolong clutch life.

HIGHER PERFORMANCE ON TYPICAL APPLICATION

A Formsprag clutch with Formchrome sprags was installed in the reaction member of a torque converter and a competitive clutch in another. After the equivalent of one year of operation, the competitive clutch showed excessive wear. The Formsprag clutch run 50% longer and showed only negligible wear. There is a Formsprag clutch for your every need—send for free catalog.

▲ For more details circle NED-957 F9 on enclosed inquiry slip ▲

TEFLON is a duPont trademark

FLEXIBLE TEFLON® HOSE TO 2" I.D. WITH METAL BRAID BENDS TO 6¾" r. AT −65° F.!

Manufactured by an exclusive Titeflex process. This metal braid exterior with the convoluted inner Teflon core, reinforced with Fiberglas® tape, has tremendous strength coupled with finger-flexibility.

RETAINS ALL TEFLON'S REMARKABLE FEATURES: toughness, chemical inertness; light weight; corrosion resistance, temperature resistance from −65° to 400° F. TITEFLEX ADDS: Exclusive "zero motion" stainless steel braiding which minimizes chafing; positive attachment fittings of stainless steel; complete qualification testing; lengths to 25 ft.; diameters of ¾", 1", 1¼", 1½", 2", and soon, to 4". WRITE FOR BULLETIN 400.

titeflex, inc., hendee st., springfield, mass.

titeflex

▲ For more details circle NED-962 F9 on enclosed inquiry slip ▲

UNIVERSAL SELECT "O" RING KITS

Fills Replacement Needs on 85% of All Industrial Equipment

* 180 "O" Rings in Each Kit — Sizes 1 to 25.
* Patented Plastic Case Shows You "O" Ring Sizes in Kit at a Glance!
* Interchange Data of All Leading "O" Ring Producers in Each Kit — All Manufacturers' Numbers Converted to Universal Numbers.
* Buy Replacement Back-up Washers in these "O" Ring Sizes.

SELECT-O-RING KITS IN VITON . . $124.50
AN 6227 SERIES $59.50

Several Desirable Distributorships Available

BEARINGS, INC.
3631 Euclid Ave., Cleveland 15, Ohio

DIXIE BEARINGS, INC.
276 Memorial Drive, S. W. Atlanta, Georgia

BEARINGS, Inc., 3631 Euclid Avenue, Cleveland 15, Ohio
Dear Sir:
Please send us _____ Universal "O" Ring Kits.
Material _____ Price _____
Name _____
Firm _____
Address _____
City _____ Zone _____ State _____

▲ For more details circle NED-963 F9 on enclosed inquiry slip ▲

New Literature & Catalogs

Rolling Doors

Kinnear Mfg. Co.—Details of an extensive line of steel rolling service doors, fire doors, Bifold doors, metal rolling grilles, steel and wood Rol-Top doors, and door operators are presented in well-illustrated Bulletin 101. Basic information on door selection is presented, along with operation details, options, and specifications.

▲ For more details circle NED-964 F9 on enclosed inquiry slip ▲

Stainless Steel Strip

Uddeholm Co. of America—How martensitic stainless strip steels can be used in many applications previously restricted to high carbon strip steels is explained in 20-page illustrated booklet. This material can be hardened and tempered. Analyses, heat treating procedures, and applications of three types are covered.

▲ For more details circle NED-965 F9 on enclosed inquiry slip ▲

Small Reversible Motors

Barber-Colman Co., Small Motors Div.—Four types of alternating current, shaded pole, reversible, nongeared motors with ratings from 0.00015 to 0.04 hp are described in 8-page Catalog R-1. Electronic controls for these motors are covered.

▲ For more details circle NED-966 F9 on enclosed inquiry slip ▲

Using Radiation in Industry

Picker X-Ray Corp.—"Are You in This Profit Picture?" is a 12-page manual on the use of x-rays and gamma rays for nondestructive inspection and product testing. Case studies are cited on typical applications. Charts show the physical, chemical, and biological effects for various dosages of radiation.

▲ For more details circle NED-967 F9 on enclosed inquiry slip ▲

By-Pass Relief Valves

Fulflo Specialties Co.—16-page "Mechanical Data Book" deals with piston type, oil relief, by-pass hydraulic valves. Engineering, application, and flow data aid in design and selection. Valves are available in ¼ to 3-in. sizes for service to 500 psi, and in brass, cast iron, and steel constructions.

▲ For more details circle NED-968 F9 on enclosed inquiry slip ▲

Waste Receptacles

United Metal Cabinet Corp.—Swing top and round top waste receptacles, convertible lids, and other sanitation products are described and illustrated in 8-page catalog. Sanitation and maintenance products are suited for all industries.

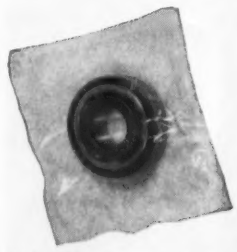
▲ For more details circle NED-969 F9 on enclosed inquiry slip ▲

Heavy Duty Electric Hoists

Northern Engineering Works—Low headroom, rolled steel frame, hoist drum parallel to the monorail beam, and integral electric brake and motor are among the features of the Hi-Lift heavy duty electric hoists mentioned in illustrated Catalog H-113. Specifications of models with 4000 to 30,000-lb capacities are given.

▲ For more details circle NED-970 F9 on enclosed inquiry slip ▲

NEW! "Showcase" Package for Metal Products Has Built-in Rust Inhibitors...



Both the sales appeal of transparency and chemical protection from rust are combined in newly-patented* Nox-Rust Clear-Pak, a high strength, heat sealable packaging film.

A durable, abrasion resistant packaging material, Nox-Rust Clear-Pak has a base of DuPont "MYLAR", strongest of all plastic films.

Iron, steel, and aluminum products—missile components, automatic and aeronautical spare parts, firearms, precision tools, hardware, etc.—packaged in Nox-Rust Clear-Pak retain their factory-new appeal for years . . . protected within by invisible volatile corrosion inhibitors . . . shielded on the outside from damaging dirt, grime and fingerprints.

The need for oil and grease protective coatings is eliminated.

Nox-Rust Clear-Pak is available in pouches of desired size, ready for loading and heat-sealing, or in rolls for automatic packaging machinery.

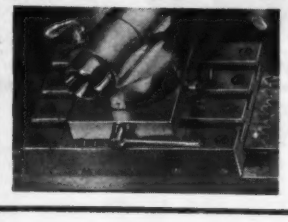
For complete information about this unusual film for ferrous metals and aluminum, write or phone.

Nox-Rust Division, Daubert Chemical Company
4700 S. Central Avenue, Chicago 38, Illinois • LUdlow 2-1000
For 25 years the Leading Manufacturers of Corrosion Control Products.

*Patent No. 2,829,080. Others pending.

▲ For more details circle NED-971 F9 on enclosed inquiry slip ▲

Specify genuine Allen Flat Heads for smooth, flush surfaces



In countersunk tapped holes, these *genuine* Allens give you absolutely flush surfaces. Hex-socket wrenching eliminates burred slots, protruding heads. "Pressurformd" to preserve long fibers uncut . . . with Allen's exclusive easy-starting Leader Points. Class 3A fit; No. 4 through ¾" diameters. Write for FREE samples and full details.

The cost of Allen Hex-Socket Cap Screws is only a minor fraction of your assembly costs . . . be sure you're getting the timesaving, cost-saving advantages of genuine Allens.

Stocked and sold by leading industrial distributors everywhere

ALLEN MANUFACTURING COMPANY
Hartford 1, Connecticut, U.S.A.

ALLEN HEAD

▲ For more details circle NED-972 F9 on enclosed inquiry slip ▲

Why United States Envelope Co. Selected Leffel Scotch Boilers

"Our company, as you know, has fifteen plants in each of which we have had considerable experience with boilers over the past 40 to 50 years . . . In light of this experience, and after a thorough canvass of the field, we recently purchased two of your 175 HP Leffel Scotch Type Boilers . . . Both are fully automatically controlled and fired with combination oil and gas burners . . . Our confidence in the rugged dependability, long life and freedom from expensive repairs represented by Leffel boilers is evident."

W. K. Ramsey, Engineering Manager
United States Envelope Company
Worcester, Mass.

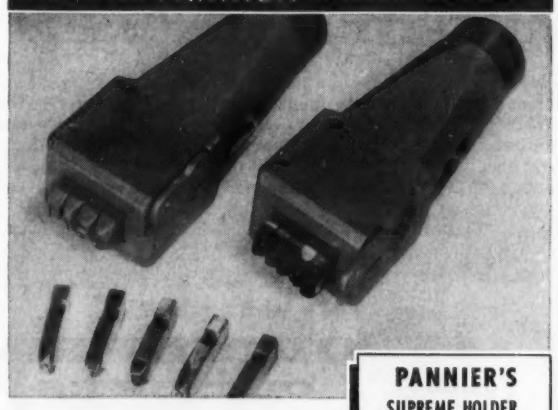
Mr. Ramsey knows boilers — and his decision to buy Leffel boilers is based on his company's broad experience. Don't be misled by the meaningless claims and promises so common in today's boiler advertising. U. S. Envelope's decision, after a thorough survey of the field, is real evidence of the superior construction and performance of Leffel boilers.

For complete details on Leffel boilers — gas, oil or coal-fired — for requirements from 6 to 500 HP, write today for your free copy of Bulletin 236. Compare Leffel construction with anything else on the market. The facts and figures will prove that you should buy Leffel . . . and that will be the beginning of safe, carefree, profitable boiler operation for you.

THE JAMES LEFFEL & COMPANY
Dept. D
SPRINGFIELD, OHIO

▲ For more details circle NED-973 F9 on enclosed inquiry slip ▲

ANOTHER PANNIER MASTER MARKER!



New Roto-Pin type lock is integral part of *all* Pannier Supreme Holders . . . eliminates loose, bent, dropped, or lost pins . . . flip it open to change type . . . flip it back to securely lock type in clear-marking position.

PANNIER'S SUPREME HOLDER WITH ROTO-PIN LOCK

Safe, fast type changing. Holder in variety of styles. Machined from High-Grade Bar Tool Steel. Hardened anvil maintains type alignment. Striking Head of Tool Steel . . . Replaceable to add long service life to Holder.

Write for complete data.

BIRTHMARKED MATERIALS

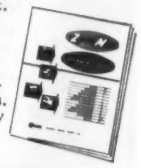
MARKING DEVICES
THE PANNIER CORPORATION
301 Pannier Building • FAirfax 1-5185 • Pittsburgh 12, Pa.
Offices: Los Angeles • Chicago • Cleveland • Philadelphia • Birmingham

▲ For more details circle NED-974 F9 on enclosed inquiry slip ▲

Zero-Max for the SPEED you need

...on lead screw feeds —for lathes and grinders...tables ...mills

ZERO-MAX gives you the speed you need for finer finishes, quicker, more accurate positioning and longer blade, cutter, band and wheel life. This infinitely variable speed control is smoother and quieter than most other original power equipment. By merely moving a lever, you can change speed or direction at any time, running or not. Speeds from zero to 400 rpm—torque up to 100 inch-pounds. With or without motor, and with gearheads for multiplying speed range or torque up to 4½ times. What's your rpm problem? *Write for fully illustrated 16 page catalog.*

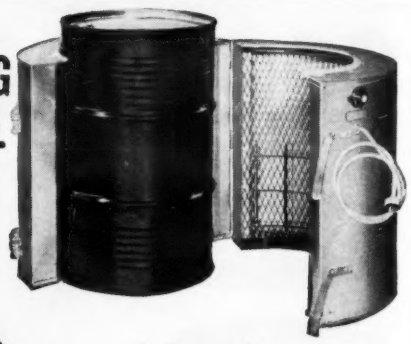


The **ZERO-MAX** *Company*
subsidiary of REVCO INCORPORATED
1908 Lyndale Ave. S., Minneapolis 5, Minn.

Zero-Max FHP INFINITELY VARIABLE SPEED CONTROLS

▲ For more details circle NED-975 F9 on enclosed inquiry slip ▲

WARMS ANYTHING IN METAL DRUMS UP TO 450°F



Palmer *Automatic* DRUM WARMER

A PORTABLE ELECTRIC OVEN in four models for 55 and 30 gallon steel drums, 120 and 100 lb. grease drums.

Saves Time—Saves Money. Makes removal from drum by dipping, pouring or pumping, easy and convenient, for any viscous material that handles better when warm.

Operates automatically and economically. Two hinged halves, well insulated, fit around drum at point of use—eliminates handling hot drums. Supplied for 115, 208, 230 or 460 volts, single, or three phase. Catalogue, prices and specifications on request. Write today!

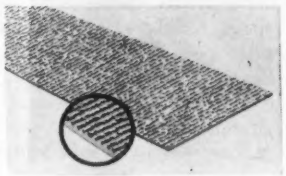
HAROLD L. Palmer COMPANY

28625 Grand River, Farmington, Michigan, Phone GReenleaf 4-4350

▲ For more details circle NED-976 F9 on enclosed inquiry slip ▲

New Processes & Materials

TEXTURED RUBBER MATTING
looks like carpeting, prevents slips



Cord-Tex rubber matting has a deep-molded texture which looks like carpeting, plus the wear-resistant strength of cord-reinforced rubber. Matting assures sure footing in heavy foot-traffic areas and helps reduce floor maintenance costs. It is reversible because it has corrugations molded perpendicular to texture on opposite side. Product is available in black, in 25 and 50-yd rolls, 27 in. wide. Stair treads in matching texture, color, and width are also offered. Made by **Buxbaum Co.**, 1212 Seventh St. S.W., Canton 1, Ohio.

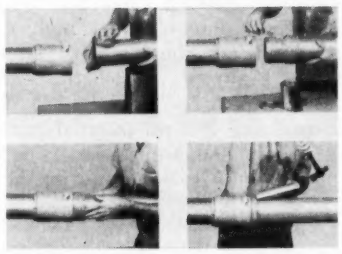
▲ For more details circle NED-978 F9 on enclosed inquiry slip ▲

DRAFTING FILM
matte finished on one or both sides

Repeated erasures can be made without detrimental effect or leaving ghost images upon the matte surface of Cronaflex drafting film. It is offered with a matte finish on one or both sides for pencil or ink drawing. Title block printing with fast drying inks may be used on either matte or nonmatte side. The 0.004-in. Du Pont polyester photographic film base is virtually tearproof, can be creased without damage to the matte surface, and is unaffected by moisture. Common solvent cleaners may be used. Made by **E. I. du Pont de Nemours & Co.**, Photo Products Dept., 1007 Market St., Wilmington 98, Del.

▲ For more details circle NED-979 F9 on enclosed inquiry slip ▲

PLASTIC PIPE FITTINGS
broaden applications of pipe



Introduction of a broad line of fittings for Bondstrand reinforced plastic pipe makes possible its use for ducts, conduit, and handrails in difficult plant environments. Epoxy and Fiberglas pipe has been tested for fresh, salt, and waste water; sewage; oils; solvents; foods; beverages; gases; and other corrosive solutions, plus acid and alkaline soils, and stray currents. New fittings include 90 and 45-degree elbows, tees, couplings, and others for threaded or plain end pipe. Ductile iron flanges with the locking wedge feature are also available. Flanged and Victaulic type fittings will be offered soon. Made by **Amercoat Corp.**, 4809 Firestone Blvd., South Gate, Calif.

▲ For more details circle NED-980 F9 on enclosed inquiry slip ▲

SEE THE COMPLETE LINE!

HILD

TRANSFERABLE HEAD
VACUUM CLEANERS

FOR USE ON YOUR OWN 55 GALLON DRUM

WRITE FOR INFORMATION
HILD FLOOR MACHINE CO. INC. NED-69
1217 W. Washington Blvd., Chicago 7

Manufacturers of Floor Machines and Industrial Vacuum Cleaners Since 1927

▲ For more details circle NED-981 F9 on enclosed inquiry slip ▲

A COMPLETE LINE OF PNEUMATIC TOOLS

UNIQUE PERFORMANCE • QUIETER OPERATION • EXTRA WORK CAPACITY • LIGHTER WEIGHT • MAXIMUM VERSATILITY • SIMPLE, STURDY CONSTRUCTION • NON-FRICTION CLUTCH • GUARANTEED FACTORY REPAIR SERVICE • LESS MAINTENANCE • SUPERIOR TORQUE CONTROL • REDUCED TORQUE REACTION

TOOL USERS KNOW!

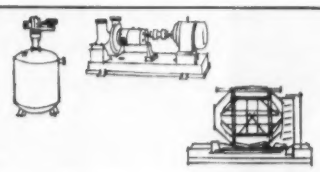
The most detailed printed or verbal information can give only an indication of an air tool's performance. To determine its true worth you must use an air tool on the job. Find out — through actual job use — just how outstanding Cleco air tools really are. Call your local Cleco representative for a demonstration-tryout of the Cleco tools of your choice. No obligation, of course.

CLECO AIR TOOLS

A Division of Reed Roller Bit Company
P. O. Box 2119 • Houston 1, Texas
IN CANADA: Cleco Pneumatic Company of Canada, Ltd.
927 Millwood Road, Leaside (Toronto), Ontario

▲ For more details circle NED-982 F9 on enclosed inquiry slip ▲

best way to seal any shaft!



Name your most difficult shaft sealing problem, and you've named the best reason for using a Borg-Warner Mechanical Seal on that shaft.

The real practical value of Borg-Warner Seals is their ability to seal *effectively* under the toughest extremes of temperature and pressure ...for toxic, volatile or corrosive fluids...and even some abrasive liquids. *Result*—less down time, elimination of leakage and expensive stuffingbox maintenance.

Borg-Warner® Mechanical Seals

NOW AVAILABLE—a new file folder of Borg-Warner Mechanical Seal designs shows some of the many types and applications possible for mixers, pumps, compressors, autoclaves and for special rotating shaft problems. Send for your copy today—there's no obligation.

BW Borg-Warner Mechanical Seals
P.O. Box 2017, Terminal Annex
Los Angeles 54, California

▲ For more details circle NED-977 F9 on enclosed inquiry slip ▲

counts...
1270 prints totals...
3829 10 PM keyed to time!
1045
3746 9 PM
0981
2188

TALLY-PRINT
PRINT-OUT RECORDER

TALLY-PRINT counts practically anything—prints totals on tape at periodic intervals and shows accumulated totals visually.

Tally-Print shows how much production you get—and exactly when you get it!

Machine production, gallons of gas pumped, cash register sales, conveyor traffic—are but a few of the operations monitored.

Tape chart pinpoints peaks and lows, furnishes accurate cost- and time-study data, guides distribution of men and equipment.

Tally-Print is universal in application, easy to install and extremely low in cost.

With Manual Reset.....$225
With Automatic Reset.....$295

For full details, write for free Catalog CT-6.

standard INSTRUMENT CORP.
657 BROADWAY, NEW YORK 12, N. Y.

▲ For more details circle NED-985 F9 on enclosed inquiry slip ▲

R-W FUSIBLE LINKS
for FIRE DOORS & WINDOWS

...constant protection against the menace of fire!

- Available in a wide range of types and sizes.
- Available with standard "breakaway" temperatures of 160°, 212°, 286°, and 360°...also made with any special "breakaway" temperature you desire.
- Links carry up to 25 lb. loads... available in double, triple and quadruple link assemblies to carry loads up to 100 lbs.
- R-W Fusible Links are Underwriters and Factory Mutual Laboratories Approved.

R-W Fusible Links provide a constant guardian against the spread of fire... always ready to release fire blocks at the first sign of excessive heat. Ideal for fire doors, windows, hoods, hatchways, ventilation fans, etc. Economical to buy and install... especially economical when you consider that a fusible link could prevent thousands of dollars worth of damage. Write today for Brochure No. F-184.

R-W FIRE DOORS & HARDWARE... Underwriters and Factory Mutual Laboratories Approved for Class A, B, C, D, E, and F openings. Quickly and easily installed... provides 24 hour a day protection... lowers your insurance rates. Write today for Catalog No. 420.

RICHARDS-WILCOX MFG. CO.
435 W. Third Street • Aurora, Illinois • Branches in Principal Cities

▲ For more details circle NED-986 F9 on enclosed inquiry slip ▲

See Your COST DIFFERENCE with this DIFFERENT FINISHING MEDIUM

Time-Savings Up to 50%
Burring • Cleaning
Finishing • Polishing
frequently in one operation!

Broad, new applications never before associated with abrasives. Abrasive and rubber work simultaneously in an amazing action. Wheels, sticks, rods and blocks, JOB-MATCHED to your machine and manual operations. A wide range of grains and textures.

THE ONLY COMPLETE STOCK LINE OF RUBBER-BONDED ABRASIVES!

Say goodbye to many older, costlier metalworking methods!

WRITE NOW FOR:
- SAMPLE BRIGHTBOY HAND TABLET
- CATALOG LISTING GRAINS, TEXTURES, MACHINE SPEEDS
- NEW METHOD RECOMMENDATIONS and for name of nearest Brightboy distributor

BRIGHTBOY INDUSTRIAL DIVISION
WELDON ROBERTS RUBBER CO.
95 North 13th Street
Newark 7, N. J.
America's Pioneer Manufacturer of Rubber-Bonded Abrasives.

WELDON ROBERTS
Brightboy
RUBBER CUSHIONED ABRASIVES

▲ For more details circle NED-987 F9 on enclosed inquiry slip ▲

New Literature & Catalogs

Precision Instrument Components

PIC Design Corp.—Over 10,000 precision instrument components, including gears, shafts, collars, couplings, speed reducers, and differentials are detailed in 416-page pocket-size Master Catalog 20. Drawings, specifications, and prices are given. Catalog has separate technical data, breadboard kit, and precision tool components sections.

▲ For more details circle NED-988 F9 on enclosed inquiry slip ▲

Material Handling Films

Material Handling Institute, Inc.—Briefly described in 16-page booklet "Industrial Material Handling Films" are 63 sound and silent, color and black and white films available for loan at no cost except shipping and insurance charges. They are available from member-companies and cover monorail and crane systems, fork lift trucks, conveyor systems, pallets and racks, batteries, straddle carriers, and packaging equipment.

▲ For more details circle NED-989 F9 on enclosed inquiry slip ▲

Environmental Equipment

Conrad, Inc.—Descriptive data on temperature-vibration test chambers and temperature-altitude-vibration test chambers are found in 8-page illustrated brochure. Units range in size from small portable equipment to walk-in size.

▲ For more details circle NED-990 F9 on enclosed inquiry slip ▲

How to Prevent Rust

Rust-Lick, Inc.—"The A, B, C's of Rust-Lick for Rust Prevention" is title of 20-page booklet which discusses the basic causes of rust and how to prevent it with rust preventive compounds. Various types of rust preventing liquids are covered, and their advantages are explained.

▲ For more details circle NED-991 F9 on enclosed inquiry slip ▲

Electrical Connectors

Crouse-Hinds Co.—48-page bulletin "Ark-trol Electrical Connectors" describes a line of plugs and receptacles of environment resistant construction. They are moistureproof, shock insulated, dust-tight, and corrosion resistant. All are suited for −80 to 225° F range, and 300 psi external and 200 psi internal pressures. Specifications of entire line are given.

▲ For more details circle NED-992 F9 on enclosed inquiry slip ▲

Safety Relief Valves

Marine & Industrial Products Co.—Line of safety relief valves ranging in size from ½ to 6 in. for power, processing, and general industrial service is subject of illustrated Catalog 88 of 84 pages. They are made of bronze, semisteel, or of cast, forged, stainless, or alloy steels. Maximum service ranges are 20 to 3000 psi and 300 to 750° F. Extensive engineering charts and information are included for steam, air, gas, vacuum, and other valves.

▲ For more details circle NED-993 F9 on enclosed inquiry slip ▲

MARTIN-DECKER SENSATER
HOOK SCALE
A VERSATILE HOOK SCALE FOR EVERY INDUSTRY!
- EASY TO READ
- EASY TO HANDLE
- MORE CONVENIENT
- SAFER

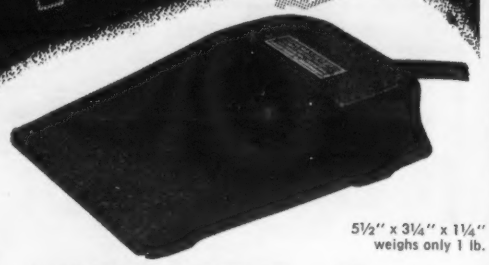
CERTIFIED ACCURACY

WRITE FOR DESCRIPTIVE LITERATURE DEPT. S-24

MARTIN-DECKER CORP.
HOME OF THE WEIGHT INDICATOR — LONG BEACH, CALIFORNIA

▲ For more details circle NED-994 F9 on enclosed inquiry slip ▲

A TOUCH OF THE TOE keeps production stepped-up



5½" x 3¼" x 1¼" weighs only 1 lb.

LINEMASTER, JR.
FOOT SWITCH
Ideal for women workers!

The hand that pulls the switch wastes time! Sensitive LINEMASTER, JR. Foot Switch keeps both hands at work—needs only tip-toe control. Your women workers, especially, will appreciate LINEMASTER, JR.'s instant response to the toe alone—heels remain comfortably on the floor, lessening fatigue and increasing production. Light-weight, streamlined aluminum housing with black crackle enamel finish.

Let us quote on your special switch requirements.

Write today for catalog and price list

America's Footswitch leader for over 20 years.

LINEMASTER SWITCH CORP.
424 Woodstock Terrace, Woodstock, Conn.

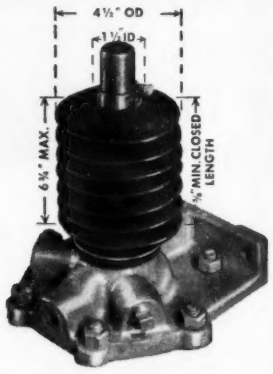
▲ For more details circle NED-995 F9 on enclosed inquiry slip ▲

PROTECTED

GORTITE (neoprene)

SLEEVES

BOOTS

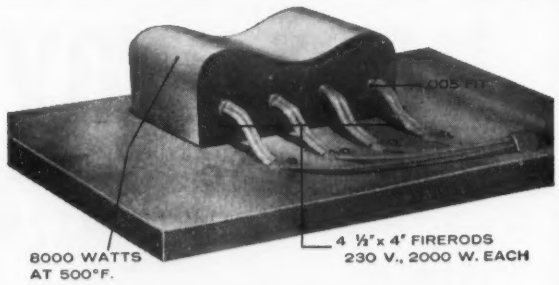


Ask for new bulletin AH-3

A&A MFG. COMPANY, Inc.
712 S. 12th Street, Milwaukee 4, Wis.

ALL SHAPES AND CONTOURS
BOOTS . . . SLEEVES . . . WAY PROTECTORS

▲ For more details circle NED-996 F9 on enclosed inquiry slip ▲



THIS STEEL DIE PROVES FIREROD'S HIGH WATTS DENSITY

5 times more heat than any standard cartridge heater This 4" x 6" x 2" steel die can be heated to 500°F. in two minutes with four ½" x 4" Firerod units, wired in parellel and rated at 370 w/sq. in. A standard unit would be rated at about 120 w/sq. in. for the same application.

The Secret is in the Manufacture. This high watts density, along with high temperature potential and longer life, is the result of a special manufacturing technique that permits minimum tolerances between resistance wire and unit sheath — to permit rapid, highly efficient heat transfer.

WRITE for illustrated literature

WATLOW
ELECTRIC MANUFACTURING CO.
1374 Ferguson Avenue St. Louis 14, Mo.

▲ For more details circle NED-997 F9 on enclosed inquiry slip ▲

FREE LUBRICATION SURVEY OF YOUR PLANT

Eliminate bearing failures like this
(due to haphazard lubrication)

An experienced Farval engineer will come into your plant and conduct a Free Lubrication Survey of your equipment. This Farval Survey will tell you:

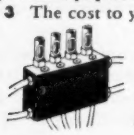
1 The most economical method of lubrication for each piece of your equipment.

2 Whether centralized lubrication can be installed on your present equipment.

3 The cost to you of a Farval centralized system of lubrication on any or all pieces of machinery.

4 How centralized lubrication can increase bearing life, save you maintenance costs and increase production.

These are facts that can save you thousands of dollars! A Farval engineer is ready to serve you promptly. This is a Free Survey—no obligation. Write today!



THE FARVAL CORPORATION
3283 East 80th Street • Cleveland 4, Ohio
Affiliate of The Cleveland Worm & Gear Company
(Subsidiary of Eaton Manufacturing Company)

For more details circle NED-998 F9 on enclosed inquiry slip

New CHIKSAN DS SERIES
SWIVEL JOINT for
CHEMICAL, STEAM & HOT GAS SERVICES

Versatile Packing Design Permits Use of Disc or Molded Packings to Handle Wide Variety of services

Send for Free Bulletin 1258

Replace seals with swivel joint in the line.

New multiple service swivel joint handles chemicals from −40°F. to +400°F. as well as steam and hot gas. Change seals only. Use molded elastomer packings, including new Viton "A", for many chemicals and general services. For steam and hot gas, use disc seal. DS Series swivel joints are rated at 1000 psi or maximum temperature of 600°F. Information on packing types and materials for specific services, dimensions, and pressure-temperature relationship chart are in bulletin 258.

CHIKSAN COMPANY
BREA, CALIF.; CHICAGO 5, ILL.; NEWARK 2, N. J.
Subsidiaries: Chiksan Export Co., Chiksan of Canada Ltd.

For more details circle NED-999 F9 on enclosed inquiry slip

NEW! **ERIEZ**
HI-VI VIBRATORY FEEDERS and BIN VIBRATORS

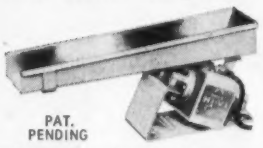
PAT. PENDING

specially constructed for
HAZARDOUS, DUSTY LOCATIONS

FULLY ACCEPTABLE BY MILL MUTUAL FIRE PREVENTION BUREAU

First Mill Mutual Acceptable electro-permanent magnetic vibratory equipment at economical prices!

Vibratory Feeders — accurately feed and control bulk materials from ounces to tons. Completely enclosed drive element, built-in glass fiber springs, impotted epoxy sealed electrical coil. Needs no rectifier.



PAT. PENDING

Unit (Bin) Vibrators — keep hard-to-move materials flowing through bins, chutes, etc. Exclusive pinpointed vibration impact. Completely enclosed and sealed. No sliding or rotating parts to wear. No rectifier needed.

ERIEZ

WRITE FOR BIG VIBRATORY FACT FILE
Eriez Mfg. Co., 80-T Magnet Dr., Erie, Pa.

For more details circle NED-1000 F9 on enclosed inquiry slip

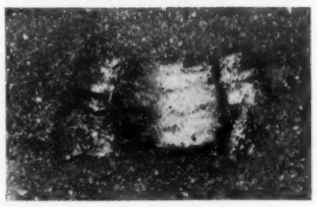
New Processes & Materials

WEAR STRIP MATERIAL
extruded rectangular stock offered

Original cast and rolled forms of wear strip material are supplemented with this extruded rectangular stock produced from copper-base alloys in 46 sizes. It is used for slides, wear plates, gibs, ways, and similar applications. Grade 18 extruded rectangles are virgin metal. Tensile strength ranges from 100,000 to 108,000 psi and yield strength from 50,000 to 55,000 psi. Brinell hardness under 3000 kg load is from 200 to 230. Made by **Ampco Metal, Inc.**, 1745 S. 38th St., Milwaukee 46, Wis.

For more details circle NED-1001 F9 on enclosed inquiry slip

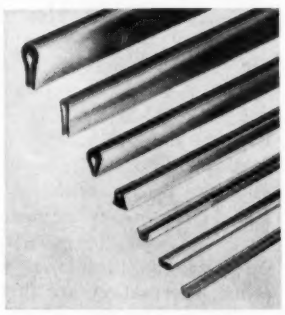
PIPE INSULATION
poured around pipes in trench



Hot underground pipes are given three zones of protection against water, corrosion, and heat loss by Tri-Sul-Ite gilsonite material after proper curing. It is poured under and around all pipes in a trench. Protection from corrosive soil conditions is provided. Close-up photo of plastic zone of the material is peeled back to show adhesion to the pipe. Made by **G. S. Ziegler & Co.**, 172 Great Neck Rd., Great Neck, L. I., N. Y.

For more details circle NED-1002 F9 on enclosed inquiry slip

EXTRUDED NYLON SHAPES
for runners, tracks, wear surfaces



Extruded profile shapes of Nylatron GS, a molybdenum disulphide filled nylon, minimize wear and friction on sliding surfaces. The nylon does not gall or erode metals or other unlubricated materials. Applications include runners, conveyor or channel tracks, sash linings, and other sliding contact or protective wear surfaces. Custom shapes can be produced with total cross-sectional areas of 0.003 to 0.150 sq in. Resilient shapes can be force-fitted in or around connecting members, or fastened with conventional or special techniques. Made by **Polymer Corp. of Pennsylvania**, 2140 Fairmont Ave., Reading, Pa.

For more details circle NED-1003 F9 on enclosed inquiry slip

FOR DEPENDABILITY...QUALITY ...ECONOMY...GET KISCO

Tomorrow's Engineering Today

KISCO SUPER FLO© Water Softeners

New design supplies large volume of flow rate with a smaller size softener

The new Kisco Super-Flo provides a non-restricted maximum flow of soft water, making it possible to obtain the same high capacity with a smaller size unit. Select the softening capacity to meet your requirements with a resulting tremendous saving in initial cost. Write for catalog.

KISCO BOILER & ENGINEERING CO.
2400 DE KALB STREET ST. LOUIS 4, MISSOURI

For more details circle NED-1004 F9 on enclosed inquiry slip

QUICK-ACTING COUPLERS GIVE CONVENIENT AIR POWER

Save time and trouble by plugging in your air tools close to the work. A simple push locks air line in place, automatically starts air flowing. Swivel action prevents hose kinking. Line cannot be accidentally uncoupled—it requires a definite twist on the sleeve. Uncoupling automatically shuts off air. Available in many sizes of check units and adapters, male and female threaded, heavy duty and standard. Place them conveniently along walls, benches or columns for best use of your air tools. **Send for full details in informative literature today.**

Schrader®
A. SCHRADER'S SON
Division of Scovill Manufacturing Company, Inc.
459 Vanderbilt Avenue, Brooklyn 38, N. Y.

For more details circle NED-1005 F9 on enclosed inquiry slip

IT COSTS LESS TO USE THE BEST!

PLS

1. Takes less PLS to give a perfect seal.

2. One compound for many services: water...oil...gas...steam...chemicals...petroleum products...refrigerants—low and high pressures.

3. Never washes out—one application lasts forever.

4. Never hardens: joints may be easily broken after years of service—no damaged connections.

Prove it to yourself. Send for a free sample. Crane Packing Co., 641 Oakton St., Morton Grove, Ill., (Chicago Suburb)

John Crane CRANE PACKING COMPANY
In Canada: Crane Packing Co., Ltd., Hamilton, Ont.

For more details circle NED-1006 F9 on enclosed inquiry slip

Most Reliable UNIONS on the market!

ROCKWOOD steel unions

You can apply Rockwood cold-forged Steel Unions to a wider range of applications because they're the *only* unions that offer 4 different seat types and *complete* corrosion protection. Select any seat: Silicon Bronze, Stainless Steel, Moly Steel, or Moly to Silicon — you also get "Rockwoodizing," the process that makes the entire surface of the union, including threads, corrosion resistant. Scratches can't spread rust . . . surface can't chip or peel.

Rockwood Unions make up smoothly and easily . . . can take constant shock and vibration and rough handling from wrenches. Available in a wide range of sizes. All parts interchangeable. Add life to your lines with Rockwood Unions. For latest catalog, write Rockwood Sprinkler Company, 960 Harlow Street, Worcester 5, Mass.

ROCKWOOD SPRINKLER COMPANY
Distributors in All Principal Industrial Areas

For more details circle NED-1007 F9 on enclosed inquiry slip

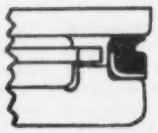
SEALED FOR SERVICE

RBC® PITCHLIGN®

ROLLER BEARINGS with SEALS

Why sacrifice bearing performance under conditions that require protection from foreign elements.

The same dependable performance of the RBC PITCHLIGN is yours with the added protection of molded synthetic rubber seals. Available in a standard series of Sealed Pitchlign Roller Bearings.



Positive seats provided by shoulders separate seals from all revolving parts. Permits free, no bind roller-cage operation for top efficiency.

Seals can be mounted for retention of lubricant or exclusion of foreign matter.

More details?...Write for Bulletin SF-B2.

RBC ROLLER BEARING COMPANY OF AMERICA
Sullivan Way • West Trenton, N. J.

▲ For more details circle NED-1008 F9 on enclosed inquiry slip ▲

LERMER PLASTIC CONTAINERS

Exceptional printing makes the difference...

Helps make the sale!

- Printed or decorated up to 4 colors on crystal clear, transparent or opaque colors
- Largest line of RIGID plastic containers
- 1/5 the weight of glass—greatly reducing ever-increasing shipping and handling costs
- Lightweight and shatterproof—with rigid wall protection
- Economical—with customer re-use value
- Also made of new high density polyethylene—Poly-Opal*. Are chemically inert, stain resistant and have lower permeability to moisture and gases than conventional polyethylene.

*T. M.

Write for full-color catalog, samples and prices.

LERMER PLASTICS, INC.
514 South Avenue
Garwood, New Jersey
PIONEERS AND SPECIALISTS IN PLASTIC CONTAINERS SINCE 1919

▲ For more details circle NED-1009 F9 on enclosed inquiry slip ▲

New Literature & Catalogs

Gas Welding Equipment

Marquette Mfg. Co.—Line of automotive and industrial oxyacetylene gas welding and cutting torches is described in illustrated 32-page catalog. Gas pressure regulators, hose connections, low temperature cutting equipment, goggles, gas welding rods, face shields, and cylinder trucks are also listed.

▲ For more details circle NED-1010 F9 on enclosed inquiry slip ▲

Aluminum Bronze Extruded Alloys

Peninsular Steel Co.—Chemical composition, typical mechanical and physical properties, and table of stocked standard sizes of Wearite aluminum bronze extruded alloys 4-11 and 4-13 are content of 4-page catalog. Application data are also included.

▲ For more details circle NED-1011 F9 on enclosed inquiry slip ▲

Beryllium Copper Alloys

Brush Beryllium Co., Pennrold Div.—Chemical analysis, physical constants, mechanical properties, and available forms of beryllium copper 10, 25, and 165 alloys are described in three 4-page data sheets. Heat treating procedures and instructions for forming, joining, pickling, rolling, and plating are presented.

▲ For more details circle NED-1012 F9 on enclosed inquiry slip ▲

Electrolytic Machining

Anocut Engineering Co.—How the Anocut process which uses electric current to disintegrate rather than grind away material is used in resharpening carbide cutting tools is related in 4-page illustrated folder. Advantages of the process and details of its cost saving features are related.

▲ For more details circle NED-1013 F9 on enclosed inquiry slip ▲

Miniature Air Cylinders & Valves

Clippard Instrument Laboratory, Inc. — Enlarged Minimatic line of miniature air cylinders, valves, valve-operating solenoids, fittings, and accessories is subject of 4-page Bulletin 4-59. Fifty-six different items in a variety of bore sizes, styles, mountings, and voltages are described and illustrated.

▲ For more details circle NED-1014 F9 on enclosed inquiry slip ▲

Rotary Pumps

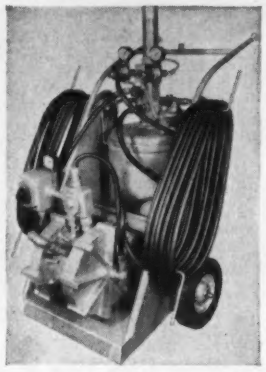
Wayne Pump Co.—Four 4-page illustrated folders and two 2-page bulletins are devoted to a line of internal gear rotary pumps. The two smaller bulletins cover 200 and 300-gpm steam jacketed series. Specifications, construction options, application data, and other information are included.

▲ For more details circle NED-1015 F9 on enclosed inquiry slip ▲

Two-Component Adhesive

H. B. Fuller Co.—Resiweld two-component adhesive No. 4 can be used to bond flexible materials to themselves and to rigid materials, according to 4-page Technical Bulletin RTB-17A-1. Its properties, application data, and instructions for use are included.

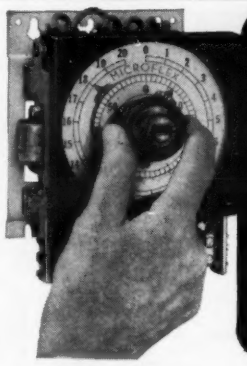
▲ For more details circle NED-1016 F9 on enclosed inquiry slip ▲



NEW HOT SPRAY PACKAGE UNIT IS SELF CONTAINED AND PORTABLE

The "Little Chief", Spee-Flo Company's new self-contained unit, is the first to offer a complete, portable hot spray system with the capacity and long hose lengths needed for all types of maintenance painting, metal finishing and other applications requiring portability and large work radius application. The mobile unit provides hot spray temperatures for one or two guns on hose lines up to 75 feet in length. It combines the U.L. approved Spee-Flo hot spray heater and divorced action pump in a single compact unit which takes the original paint pail. Temperature selection is automatic with a dial-type controller. A single air and electrical connection places the complete spraying system in operation. For complete information on this and other Spee-Flo Hot Spray Systems, write for literature and free booklet, "Why Hot Spray?" The **Spee-Flo Company, 6614 Harrisburg, Houston 11, Texas**

▲ For more details circle NED-1018 F9 on enclosed inquiry slip ▲



microflex
RESET TIMER
20 turn dial provides EXACT timing for industrial processes

The double micrometer dial permits 1200 accurate, visual settings over entire dial range. Set this timer for 18 min. 6 sec. or any other exact time setting required.

Savings Large 15 ampere contacts eliminate additional load relays. • Stop down time with plug-in components for fast timer replacement.

Flexibility Easy to set dial whether short or long timing. • Choice of 9 actions available for each of 3 contacts. Select operation required for your circuit.

Accuracy Set dial to exact time required. No guessing at numbers. • Accurate repeatability insures uniform production.

Reliability Proven reliability in thousands of industrial processes for more than 25 years.

SEND FOR NEW EAGLE BULLETIN 110
Simply write to Eagle Signal Corporation, Industrial Timers Division, Moline, Illinois, Dept. NED-659.

EAGLE SIGNAL CORPORATION
Industrial Timers Division • Moline, Illinois

▲ For more details circle NED-1019 F9 on enclosed inquiry slip ▲

DELROYD
WORM GEAR SETS

New high efficiency... higher horsepower ratings

JUST OUT

Send for this new Delroyd Worm Gear Sets Catalog #3800
It contains comprehensive information on selection, much of which has never been published before.

DE LAVAL *Steam Turbine Company*
907 Nottingham Way, Trenton 2, New Jersey

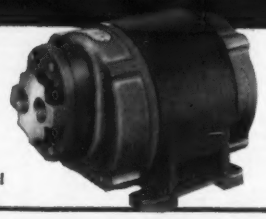
DL463A

▲ For more details circle NED-1017 F9 on enclosed inquiry slip ▲

New Additions to ROPER T SERIES

CHOICE OF 192 MODELS

.3 to 55 GPM - to 400 PSI



COMPACT, INTEGRAL PUMP and MOTOR UNITS
For Hydraulic, Pressure Feed, Transfer Work

Compact, lightweight, "all-in-one" units with pump serving as end bell of motor. No coupling required — saves space. Furnished with open drip proof or totally enclosed standard NEMA motors, single or three phase. Send for Bulletin 31 today!

- COMPLETE, COMPACT UNITS
- LOW FIRST COST
- MOUNT IN ANY POSITION
- LONG LIFE SERVICE

ROPER HYDRAULICS, INC.
666 Blackhawk Park Ave.
Rockford, Illinois

ROPER ROTARY PUMPS

▲ For more details circle NED-1020 F9 on enclosed inquiry slip ▲

☐ Reduce costs
☐ Simplify assembly
☐ Improve appearance with

GRC DIE CAST ZINC ALLOY & MOLDED NYLON FASTENERS

DIE CAST ZINC ALLOY: Wing Nuts, Cap Nuts, Thumb Nuts, Thumb & Wing Screws, MOLDED NYLON: Screws, Hex Nuts, Washers, Screw Insulators

WING NUTS

Just 4 of the wide range of styles available from stock . . . including extra low, high and round wings; junior and senior series . . . in thread and blank sizes from #4 thru 3/8". Patented recessed wings, smooth-acting washer-like bosses.

- High in quality
- Uniformly accurate
- Low in cost
- Wide range of stock styles, types, sizes and threads

Produced in one high speed automatic operation, GRC's exclusive methods assure uniformity, smooth, rustproof & corrosion resistant surfaces and the lowest possible cost. New kinds of fasteners never before available . . . modifications in stock fasteners for specialized use . . . infinite variety in styles, types and sizes, have been made possible by GRC's special automatic die casting and molding machines.

Write, wire, phone RIGHT NOW for prices, your copy of GRC's NEW FASTENER CATALOG

GRIES

GRIES REPRODUCER CORP.
World's Foremost Producer of Small Die Castings
143 Beechwood Ave., New Rochelle, N. Y.
NEw Rochelle 3-8600

▲ For more details circle NED-1021 F9 on enclosed inquiry slip ▲

PORTABLE PNEUMATIC SYSTEM DESIGNED FOR RAPID, SAFE, EFFICIENT CONVEYING

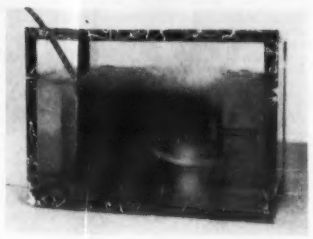
Versatility and cost cutting are just two of the many capabilities of the Hoffco-Veyor portable pneumatic system which has provided as much as an 80% savings in operating costs and increased plant efficiency by 20%. The Hoffco-Veyor is an inexpensive solution to the problem of rapid, safe movement and recovery of a wide variety of dry materials including rock granules, plastic pellets, and gritty or pulverized substances as well as corrosive chemicals.

Available in two models, portable Hoffco-Veyors normally employ 35 foot length, 2½ in. diameter hose. Collection rates vary from 50 to 100 lbs. per minute depending on conditions and model in use. Where quantities exceed 7½ cubic feet standard 55 gallon drums can be used as auxiliary collectors. Equipped with inlet valves to take standard size 1½ to 2 in. vacuum hose, the unit can be used as a vacuum cleaner or dust collector. Hoffco-Veyors easily turn their own length for wheeling to any location in the plant. Source: For free brochure and case history, **U. S. Hoffman Machinery Corp., Dept. I, 103 Fourth Ave., N. Y. 3, N. Y.**

▲ For more details circle NED-1022 F9 on enclosed inquiry slip ▲

New Processes & Materials

MOTOR CLEANING SOLVENT
motor is run submerged in cleaner



Motors clean themselves when run submerged in Motor Bath cleaning solvent. The cleaner is nonflammable, nontoxic, nonexplosive, and completely dielectric. It can also be sprayed into large motors to clean them in place with complete safety. Cleaner dries without greasy or oily residue and will not harm paint on motor housings, or harm insulating materials. It has no flash on fire point. Developed by **Ranco Industrial Products Corp.**, 13311 Union Ave., Cleveland 20, Ohio.

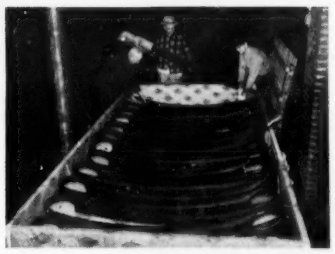
▲ For more details circle NED-1023 F9 on enclosed inquiry slip ▲

IMPREGNATED GASKETS
insure watertight seals

Cushioning action of Connectite impregnated gaskets virtually eliminates cracking in the installation of china plumbing fixtures, as well as making watertight connections. Gaskets are also applicable to swing spout packing in faucet assemblies and to marine use for eliminating water leakage in boat construction. Material can be cut to order. Made by **American Felt Co.**, Glenville, Conn.

▲ For more details circle NED-1024 F9 on enclosed inquiry slip ▲

CONTINUOUS HOSE
in large diameters without splices



Through use of a new continuous production process, large diameter hose is now being made without splices. Lengths are limited only by the size of the transportation facilities. By this process, hose liner is wrapped and sealed on a mandrel, wrapped with reinforcing cord, bagged, and cured in a continuous cycle. Hose can be made to float or sink for marine use and to handle all known chemicals and fuels. Present range of continuous hose sizes is 2 to 8 in. ID. Picture shows men packing a long length of 4-in. hose. Made by **Goodyear Tire & Rubber Co.**, 1144 E. Market St., Akron 16, Ohio.

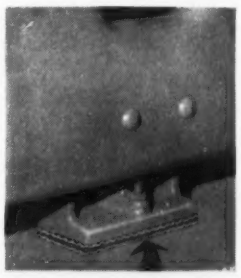
▲ For more details circle NED-1025 F9 on enclosed inquiry slip ▲

You've been reading a lot about various anti-vibration pads to reduce

deadly VIBRATION

Do you know which one is the **best,** for your purposes?

Write for free sample, and engineering data on



ANTI-VIBRATION

VIBRA √ CHECK pads

and make your own decision as whether Vibra-Check will satisfy your requirements!

CHECK ALL THESE ADVANTAGES

√ reduces vibration 90% √ reduces disturbing noises √ ease of installation — needs no bolts or cement √ permits easy relocation of machine and re-use of same pads √ prevents machine "creeping" √ load strength 7500 psi √ resists oil, grease, brine, detergents.

Send for literature and specimen sample.

LOWELL INDUSTRIES, INC.

Send for literature.

LOWELL INDUSTRIES INC.
ESTABLISHED 1938
Subsidiary of H. F. Livermore Corporation
BOSTON 34, MASSACHUSETTS

▲ For more details circle NED-1026 F9 on enclosed inquiry slip ▲

For more reliable soldering and less down time by skilled or unskilled workers

NEW Weller® SOLDERING IRONS

★ with built-in MAGNASTAT temperature control

. . . automatically maintains correct soldering temperature

Newest soldering development! Controlled temperature iron never overheats. Minimizes tip redressing. Reaches full heat quickly. Operator benefits include . . . only half the weight of uncontrolled irons; handle stays cool. Sensing device is in the Magnastat Wellertip. These advantages mean less down time and more reliable soldering for all production line employees.

3 models cover all electrical soldering requirements. All models have 3-wire plug. Send for folder.

WELLER ELECTRIC CORP. 601 Stone's Crossing Rd. Easton, Pa.

▲ For more details circle NED-1027 F9 on enclosed inquiry slip ▲

Borg-Warner Industrial Cranes

Quality at a price you can afford...

$9900.00 For a 7½-Ton, 60 Ft. Span, 3 Motor, Top-Running Double Girder Industrial Service Crane

QUALITY *and* PRICE determine value. A price like this for superior Borg-Warner construction and performance means you get top value for your crane dollars. You'll benefit three ways by installing a B-W top-running, motor driven, double girder crane like this:

- More overhead storage space than by fork truck stacking.
- Aisles and work areas cleared of floor type handling equipment.
- Low initial cost, low operating cost, low upkeep.

The crane illustrated is a typical 60 ft. span, 7½ ton capacity installation. For shorter spans, smaller capacities and lighter duty, Borg-Warner Industrial Cranes are available at even lower prices.

Industrial Cranes B-W Borg-Warner

Design it better . . . Make it better.

Find Your Nearest Distributor Under CRANES in the Yellow Pages

Distributors in all principal industrial cities

Borg-Warner® INDUSTRIAL CRANES
1584 S. PAULINA STREET, CHICAGO 8, ILLINOIS, Export Sales: Borg-Warner International, 36 South Wabash Ave., Chicago 3, Illinois

▲ For more details circle NED-1028 F9 on enclosed inquiry slip ▲

SLASH Maintenance Costs

Sweeps to 35,000 Sq. Ft. per hour

TURBO SWEEP . . . Dust-free sweeping at low cost. Sweeps 50,000 ft. per hr.

MANUAL . . . Easy to maneuver around boxes, crates, in aisles. 20" and 28".

MAIL NOW!

PARKER SWEEPER CO., Dept. NE
Springfield, Ohio

Send me free booklet and give me money-saving facts!

Name _____
Company _____
Address _____
City _____ State _____

▲ For more details circle NED-1029 F9 on enclosed inquiry slip ▲

Plastic Steel® saved over $1000...

plus days of downtime for MARRINER

A broken centrifuge at Marriner Combing Company stopped production on an important order. PLASTIC STEEL® was used for on-the-spot repairs and the machine was back in operation within an hour at a cost of less than $5.00. Using conventional repair methods would involve several days and cost over $1000.

Hundreds of companies have saved time and money by repairing worn machine parts, cracked castings, leaking hydraulic systems and tanks, rebuilding worn pumps or valves, etc., with PLASTIC STEEL®.

PLASTIC STEEL® and other Devcon products are used for making jigs, fixtures, metal-forming dies, plastic and rubber molds, foundry patterns and core boxes, and other industrial tools.

PLASTIC STEEL® — as easy to use as modeling clay — hardens to steel-like strength in 2 hours . . . can be machined with regular tools. Bonds all metals, wood, glass, concrete, etc. to itself or each other. Extremely high tensile compression and impact strength — excellent chemical resistance.

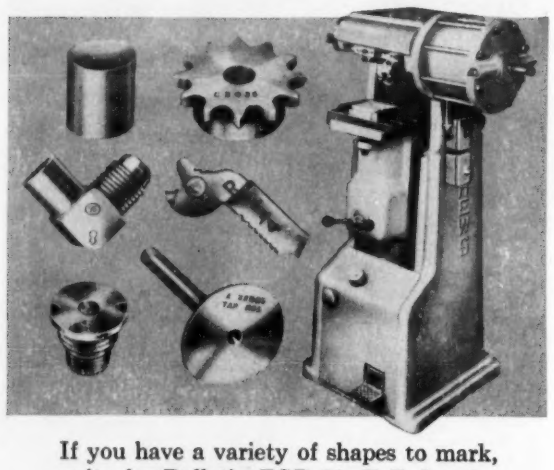
Distributed nationally by leading industrial suppliers

Find out how PLASTIC STEEL® and other Devcon products can save time, cut maintenance costs and speed production in your plant — write for FREE bulletin today.

DEVCON CORPORATION
141 ENDICOTT STREET, DANVERS, MASS.

▲ For more details circle **NED-1030 F9** on enclosed inquiry slip ▲

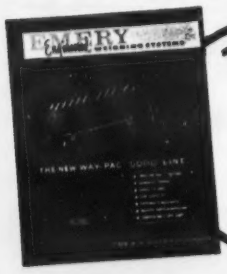
VERSATILE MARKER
for rounds or flats



If you have a variety of shapes to mark, write for Bulletin FGP 20. Full description of Matthews General Purpose Machines.

JAS. H. MATTHEWS & CO.
3962 Forbes Ave. • Pittsburgh 13, Pa.
Offices in Principal Cities

▲ For more details circle **NED-1031 F9** on enclosed inquiry slip ▲



FREE!
NEW WEIGHING SYSTEM CATALOG

Contains Engineering Details Covering New Way-Pac® 5000 Pound Capacity Load Cells

- Describes Exclusive "Rolling Ball Head"
- Explains Catenary Action of Diaphragm
- Five Different Cells in Cross Section
- Contains Details of New Totalizer
- Component Price List Part of Catalog

Write for this new Bulletin 591 today to

The A. H. Emery Co.,
Pine Street, New Canaan, Conn.
Please send me a copy of Bulletin 591 ☐
Please have your representative call ☐
NAME _____ TITLE _____
COMPANY _____
ADDRESS _____
CITY _____ STATE _____

EMERY *Engineered* **WEIGHING SYSTEMS**

▲ For more details circle **NED-1032 F9** on enclosed inquiry slip ▲

Index to Advertisers

A

A & A Mfg. Co., Inc. 106
A'G'A Div. of Elastic Stop Nut Corp. of America...50, 101
Abart Gear & Machine Co. .. 44
Abbott Ball Co., The 54
Accessory Products Corp. 63
Acme Visible Records, Inc. .. 88
Acoustica Associates, Inc. .. 5
Adams, R. P., Co., Inc. ...5, 70
Advance Floor Machine Co. .. 6
Aeronautical & Instrument Div., Robertshaw - Fulton Controls Co. 48
Aeroquip Corp. 60
Aerovent Fan Co., Inc. 49
Aget Mfg. Co. 17
Airetool Mfg. Co. 26
Ajax Flexible Coupling Co. .. 87
Albion Industries, Inc. 87
Alemite Div., Stewart-Warner 32, 71
Allen-Bradley Co. 28
Allen Mfg. Co. 104
Allenair Corp. 97
Allied Wheel Products, Inc. .. 3
Allis, Louis, Co., The 89
Allis-Chalmers Mfg. Co. 35
Alpha Molykote Corp. 20
Alsto Co. 52
Aluminum Co. of America .. 30
Aluminum Products, Inc. 59
American Air Filter Co. 100
American Brass Co. 69
American Engineering Co. ... 79
American Hoist & Derrick Co., Crosby-Laughlin Div.. 31
American Metal Hose Div., American Brass Co. 69
American Meter Co. 99
American Monorail Co. 70
American Optical Co., Instrument Div. 29
American Optical Co., Safety Products Div. 94
American Pulley Co. 33
American Pullmax Co., Inc... 100
American Recording Chart Co. 78
American Sealants Co. 98
American-Standard, Industrial Div. 14
Ames, B. C., Co. 26
Anaconda Copper Co. 69
Anchor Steel & Conveyor Co. 30
Anderson-Tully Co. 97
Angier Adhesives 101
Apex Machine & Tool Co. ... 34
Appleton Electric Co. 47
Arcair Co. 30
Arcos Corp. 102
Armite Laboratories 111
Armstrong-Blum Mfg. Co. .. 40
Artus Corp., The 39
Assembly Products, Inc. 28
Associated Spring Corp. 21
Aurand Mfg. & Equipment Co. 11
Aurora Equipment Co. 51
Automatic Transportation Co. 95
Automation Devices, Inc. 69
Autotron, Inc. 55

B

B & H Instrument Co., Inc... 3
Ballymore Co. 55
Barber-Colman Co. 84
Barry Controls, Inc. 88
Bassick Co. 78
Bausch & Lomb Optical Co... 82
Bay West Paper Co. 29
Bear Mfg. Co. 90
Bearings Inc. 104
Beaver Pipe Tools, Inc. 42
Beck Equipment Co. 47
Becker Brothers Carbon Co... 79
Bellows Co. 52
Bendix Aviation Corp. 27
Benjamin Electric Mfg. Co. .. 9
Bergen Wire Rope Co. 60
Bernard Welding Equipment Co. 90
Beverly Shear Mfg. Co. 36
Bil-Jax, Inc. 88
Bilco Co., The 83
Bin-Dicator Co. 65
Black & Decker Mfg. Co. 112
Black, Sivalls & Bryson, Inc. 86
Blaw-Knox Equipment Div., Blaw-Knox Co. 92
Borg Equipment Div., of Amphenol-Borg Electronics Corp. 87
Borg-Warner Industrial Cranes 109
Borg-Warner Mechanical Seals 105
Bostitch, Inc. 19
Boston Gear Works 102
Bowser, Inc. 16, 89
Brady, W. H., Co. 57
Brainard Steel Div., Sharon Steel Corp. 83
Breuer Electric Mfg. Co. 53
Brightboy Industrial Div., Weldon Roberts Rubber Co. 106
Brighton Screw & Mfg. Co... 39
Brooks & Perkins, Inc. 93
Brown, W. R., Corp. 39
Brown Engineering Co. 75
Brown & Sharpe Mfg. Co. ... 26
Browning Mfg. Co. 2
Buchanan Electrical Products Corp. 12
Buckeye Tools Corp. 74
Burgess-Manning Co. 52
Burgmaster Corp. 29
Buschman, E. W., Co. 8
Bussmann Mfg. Co. 56, 57

C

Cabot, Samuel, Inc. 40
Cameron Machine Co. 102
Campbell Box & Tag Co. 74
Capewell Mfg. Co., The 75
Carboline Co. 94
Carpenter Steel Co. 69, 94
Chain Belt Co. 17
Chainveyor Corp. 7
Chandler Products Corp. 55
Charleston Rubber Co. 11
Cherry-Burrell Corp. 53
Chicago Eye Shield Co. 22
Chicago Mfg. & Distributing Co. 57
Chicago Tramrail Corp. 68
Chicago-Wilcox Mfg. Co. 82
Chiksan Co. 107
Chisholm-Moore Hoist Div. .. 9
Circo Equipment Co. 75
Clair Mfg. Co., Inc. 81
Clark Equipment Co. 39
Clarke Floor Machine Co. 103
Claronex Products, Inc. 76
Clearing Div. of U. S. Industries, Inc. 66
Cleco Div. of the Reed Roller Bit Co. 105
Cleveland Crane & Engineering Co. 15, 74
Cleveland Tramrail Div., Cleveland Crane & Engineering Co. 74
Cleveland Vibrator Co. 42
Cleveland Worm & Gear Co., 9
Climax Metal Products Co. .. 4
Colson Corp. 84
Columbia Electric Mfg. Co. .. 44
Columbus McKinnon Chain Corp. 8
Commander Mfg. Co. 66
Commercial Centerless Grinding Co. 46
Commercial Shearing & Stamping 92
Conco Engineering Works ... 64
Cone Drive Gears, Div. Michigan Tool Co. 73
Conneaut Rubber & Plastic Co. 46
Consolidated Chemical & Paint Mfg. Co., Inc. 77
Continental Screw Co. 94
Convoy, Inc. 34
Cook Machinery Co., Inc. ... 96
Cooper Weymouth, Inc. 86
Coppus Engineering Corp. ... 77
Corning Glass Works 82
Cover, H. S. 8
Crane Co. 28
Crane Packing Co. 11, 107
Cutler-Hammer, Inc. 95

D

Daubert Chemical Co. 104
De Laval Steam Turbine Co.. 108
Delavan Mfg. Co. 96
Delta Power Tool Div., Rockwell Mfg. Co. 26
Deluxe Metal Furniture Co... 85
Deming Co. 38
Denison Engineering Div., American Brake Shoe Co... 45
Detroit Power Screwdriver Co. 38
Deublin Co. 53
Devcon Corp. 110
DeVilbiss Co. 66
Dick, A. B., Co. 34, 87
Dillon, W. C., & Co. 31, 93
Dimco-Gray Co. 72
Dings Magnetic Separator Co. 101
Dixon Valve & Coupling Co... 64
Dodge Mfg. Co. 81
Dollinger Corp. 24
Dorr-Oliver, Inc. 71
Dresser Mfg. Div. 30
Driv-Lok Sales Corp. 25
Dry Clime Lamp Corp. 93
Duff-Norton Co. 3
duMont Corp. 77
Dundick Tool Works, Inc. ... 5
Dunham-Bush, Inc. 91
Duo-Fast 84
Durabla Mfg. Co. 37
Durant Mfg. Co. 22
Dust Suppression & Engineering Co. 65
Dwyer, F. W., Mfg. Co. 11

E

Eagle Mfg. Co. 58
Eagle Signal Corp. 108
Eastern Industries, Inc. 48
Eastman Kodak Co. 41
Eaton Mfg. Co., Reliance Div. 101
Economy Engineering Co. 83
Edmund Scientific Corp. ...2, 112
Elastic Stop Nut Corp. of America 50, 101
Electroline Co. 53
Electronic Instrument Co., Inc. 64
Elliott Co. 33
Elwell-Parker Electric Co., The 19
Emerson Electric Mfg. Co. .. 72
Emery, A. H., Co. 110
Eonic, Inc. 26
Equipment Mfg., Inc. 99
Equipto Div., Aurora Equipment Co. 51
Eriez Mfg. Co. 107

F

Fabricated Products Co. 7
Fafnir Bearing Co. 61
Fairbanks Co., The 34
Fairfield Development Lab., Inc. 73
Falcon Alarm Co. 72
Farrelloy Co. 112
Farval Corp. 107
Fastener Corp. 84
Fawick Airflex Div., Fawick Corp. 18
Federal Pacific Electric Co... 15
Federal Press Co. 100
Federal Products Corp. 5
Fenwal, Inc. 46
Ferguson, J. L., Co. 58
Fibre-Metal Products Co. 46
Fibreboard Paper Products Corp. 34
Finnell System, Inc. 70
FlexAngle Corp. 44
Flexaust Co. 71
Flexible Steel Lacing Co. ... 18
Flexo Products, Inc. 14
Flexrock Co. 111, 112
Foley Mfg. Co. 86
Food Machinery & Chemical Corp. 67
Foote Bros. Gear & Machine Corp. 76
Forge & Fittings Div., H. K. Porter Company, Inc. 62
Formsprag Co. 103
Foxboro Co., The 5
Franklin Electric Co., Inc. .. 50
Freeway Washer & Stamping Co. 73
Frick-Gallagher Mfg. Co. ... 101
Fuller, H. B., Co. 14
Fuller Co. 90

G

Garlock Packing Co. 14, 99
Gast Mfg. Corp. 85
Gear-O-Mation Div. of Michigan Tool Co. 20
Gear Specialties, Inc. 81
Gemco Electric Co. 10
General Controls Co., Automation Controls Div. 7
General Electric Co. 22, 59
General Floorcraft, Inc. 24
General Radio Co. 46
General Tire & Rubber Co. .. 23
Gerrard, A. J., & Co. 48
Gleason Reel Corp. 48
Globe Co., The 28
Goodrich, B. F., Tire Co., A Div. of The B. F. Goodrich Co. 33
Goodyear Tire & Rubber Co.. 29
Goulds Pumps, Inc. 43
Graham Transmissions, Inc... 93
Granet Corp., The 102
Graphic Systems 80
Gray Co., Inc. 69
Graymills Corp. 98
Greene Tweed & Co. 102
Greenlee Bros. & Co. 58
Greenlee Tool Co. 81
Gries Reproducer Corp. 109
Grieve-Hendry Co. 58
Grip Nut Co. 91

H

Hallemite Mfg. Co. 43
Haloid Xerox, Inc. 71
Hamilton Caster & Mfg. Co.. 68
Hamilton Tool Co., The 15
Hammond Machinery Builders, Inc. 25
Hanchett Magna-Lock Corp. . 80
Hankison Corp. 72
Hannifin Co., A Div. of Parker-Hannifin Corp. 87
Hansen, A. L., Mfg. Co. 36
Hansen Mfg. Co. 27, 82
Harrington Co. 73
Harrington & King Perforating Co., Inc. 70
Hartzell Propeller Fan Co. .. 45
Hayden-Shaw Mineral Products 18
Hein-Werner Corp. 24
Heinemann Electric Co. 51
Heppenstall Co. 67
Hewitt-Robins 59
Hild Floor Machine Co. 105
Hilliard Corp., The 5
Hobbs, John W., Corp. 73
Hobbs Mfg. Co. 77
Hollaender Mfg. Co. 42
Homestead Valve Mfg. Co. .. 101
Hood Industrial Gloves 49
Hoover Ball & Bearing Co. .. 98
Houghton, E. F., & Co. 97
Howard Industries, Inc. 74
Hunter Tools 69
Hyde Mfg. Co. 74
Hydraulic Mfg. Co. 7
Hydraulic Press Mfg. Co. ... 41
Hytrol Conveyor Co. 89

I

Ideal Industries, Inc. 3
Ilg Electric Ventilating Co. .. 61
Illinois Testing Laboratories, Inc. 76
Imperial Brass Mfg. Co. 89
Industrial East Co. 10
Industrial Engineering Equipment Co. 23
Industrial Handling Equipment Co. 23
Industrial Marking Equip. Co. 51
Industrial Products Co. 6
Industrial Retaining Ring Co. 80
Industrial Shredder & Cutter Co. 51
Ingersoll-Rand Co. 9
Injection Molders Supply Co. 96
International Molded Plastics, Inc., Structoglas Div. 64
International Nickel Co. 53
Intimex Corp. 78
Ironbound Box & Lumber Co. 6

J

Jackes-Evans Mfg. Co. 38
Jarke Mfg. Co. 102
Jarvis & Jarvis, Inc. 28
Jeffrey Mfg. Co. 75
Jenkins Bros. 91
Jennison-Wright Corp. 50
Jergens Tool Specialty Co. .. 62
Jiffy Mfg. Co. 63
Johnson Bronze Co. 97
Johnson Corp. 44
Jomac, Inc. 64
Jones, Howard B., Div., Cinch Mfg. Corp. 70
Joy Mfg. Co. 64

K

Kano Laboratories 37
Kett Tool Co. 10
Kidde, Walter, & Co., Inc. .. 54
Kinnear Mfg. Co. 91
Kisco Boiler & Engineering Co. 107
Korfund Co. 45
Kramer, H. W., Co. 65
Kunkle Valve Co. 49

L

LaDeau Mfg. Co. 4
Lapp Insulator Co. 79
Leffel, James, & Co., The... 104
Leiman Bros., Inc. 32
Lepel High Frequency Laboratories, Inc. 55
Lermer Plastics, Inc. 108
LeTourneau, R. G., Inc. 40
Libbey • Owens • Ford Glass Co. 3
Lift Trucks, Inc. 32
Linemaster Switch Corp. 106
Link-Belt Co. 13, 35
Lipe-Rollway Corp. 51
Littell, F. J., Machine Co. .. 68
Lockformer Co., The 36
Logan Co. 4
Logan Engineering Co. 61
Loomis Machine Co. 8
Lovejoy Flexible Coupling Co. 20, 78
Lowell Industries, Inc. 109
Lucas Milhaupt Engineering Co. 92
Lyon Metal Products, Inc. ... 37

M

M B Mfg. Co., A Div. of Textron Inc. 41
M-H Standard Corp. 36
Macwhyte Wire Rope Co. ... 27
Magline Inc. 112
Magna Driver Corp. 69
Manheim Mfg. & Belting Co. 32
Markal Co., The 70
Markem Machine Co. 40
Marlin-Rockwell Corp. 89
Marsh, Jas. P., Corp. 18
Marshalltown Mfg. Co. 74
Martin-Decker 106
Marvel Industries, Inc. 99
Mason-Neilan Div. of Worthington Corp. 63
Masonite Corp. 97
Master Builders Co. 15
Master Lock Co. 88
Mathews Conveyer Co. 54
Matthews, Jas. H., & Co. ... 110
May-Fran Engineering, Inc. .. 40
McGill Mfg. Co. 27, 86
Mead Specialties Co. 32
Mechanical Products Corp. .. 58
Mercoid Corp. 12
Meriam Instrument Co., The. 71
Merrill Brothers 27, 43
Methods Research Corp. 66
Metron Instrument Co. 54
Meyercord Co. 91
Michigan Oven Co. 60
Michigan Tool Co. 20
Micro-Switch, A Div. of Minneapolis-Honeywell Regulator Co. 76
Miller Sewer Rod Co. 112
Millers Falls Co. 80
Milwaukee Cylinder Co. 84
Minnesota Mining & Mfg. Co. 76
Minster Machine Co., The ... 36
Mitts & Merrill 66
Mixing Equipment Co. 44
Mobile Drilling, Inc. 16
Modernair Corp. 100
Mohr Tool & Mfg. Co. 84
Morse Chain Co., A Borg-Warner Industry 56
Mortell Co. 59
Mueller Brass Co. 93
Multistamp Co. 35
Mystik Adhesive Products, Inc. 2

N

NRC Equipment Corp. 77
Nagle Pumps, Inc. 65
National Acme Co. 25
National-Detroit, Inc. 50
National Perforating Corp. .. 4
National Screw & Mfg. Co.. 67
Navan Products, Inc., Subsidiary of North American Aviation, Inc. 97
Naylor Pipe Co. 49
Nestler Corp. 101
New York Diamond Tool Co. 4
Newark Wire Cloth Co. 67
Norgren, C. A., Co. 67
Northwestern Tools, Inc. 40
Norton Co. 88
Nu-Matic Grinders, Inc. 6
Nye Tool Co. 58

O

Ohio Nut & Bolt Co. 68
Ohio Rubber Co., The 61
Oil-Rite Corp. 95
O'Neil-Irwin Mfg. Co. 88
Osborn Mfg. Co., The 25

P

Palley Supply Co. 103
Palmer, Harold L., Co. 105
Palmer-Shile Co. 41
Palmer Thermometers, Inc. .. 60
Palnut Co. 43
Paltier Corp., The 81
Pangborn Corp. 32
Pannier Corp. 104
Pantex Mfg. Corp. 54
Parent Metal Products 3
Parish Pressed Steel Div. of Dana Corp. 54
Parker Fittings & Hose Div. of Parker-Hannifin Corp... 30
Parker-Hannifin Corp...30, 70, 87
Parker-Kalon Div., General American Transportation Corp. 8
Parker Seal Co., Div. of Parker-Hannifin Corp. 70
Parker Sweeper Co. 109
Pass & Seymour, Inc. 89
Patterson Foundry & Machine Co. 48
Pedrick Tool & Machine Co.. 41
Peerless Electric Co., The .. 85
Peerless Pump Div., Food Machinery & Chemical Corp. 67
Peninsular Steel Co. 80
Perfecting Service Co. 17
Perfection Gear Co., American Stock Gear Div. 48
Permacel 62
Pfaudler-Permutit, Inc., Pfaudler Div. 96
Phillips Drill Co. 57
Phillips Process Co., Inc. ... 17
Pine, William S. 83
Pines Engineering Co. 47
Pioneer Rubber Co. 84
Pneu-Trol Devices, Inc., Div. of Auto-Ponents, Inc. 16
Porter, H. K., Inc. 64
Porter-Cable Machine Co. ... 82
Potdevin Machine Co. 76
Precision Tool & Mfg. Co. .. 16
Premier Co., The 33
Propellair Div. of Robbins & Myers, Inc. 19
Proto Tools 92
Pulmosan Safety Equipment Corp. 52
Purolator Products, Inc. 44

Q

Quickdraft Corp. 55
Quincy Compressor Co. 76

R

Radio Corporation of America 100
Rain Jet Corp. 31
Rapids-Standard Co., Inc. ... 15
Rapistan-Keystone, Inc. 15
Rawplug Co., Inc. 6
Raymond Corp., The 90
Raytheon Mfg. Co. 19
Reed Mfg. Co. 24
Republic Steel Co. 13
Resistoflex Corp. 72
Revco, Inc. 62, 105
Revolvator Co. 103
Reynolds Ink, Inc. 86
Reynolds Metals Co. 50
Reznor Mfg. Co. 33
Richards, J. A., Co. 42
Richards-Wilcox Mfg. Co. ... 106
Robbins & Myers, Inc...19, 33, 63
Robbins & Myers, Inc., Hoist & Crane Div. 33
Robbins & Myers, Inc., Pump Div. 63
Roberts, Weldon, Rubber Co., Brightboy Industrial Div. .. 106
Robertshaw - Fulton Controls Co. 48
Robertson Steel & Iron Co. .. 62
Rochester Mfg. Co. 60
Rock-Tred Corp. 103
Rockwell Mfg. Co. 26, 77, 94
Rockwell Mfg. Co., Nordstrom Valve Div. 94
Rockwell - Standard Corp., Grating Div. 78
Rockwood Sprinkler Co. ..18, 107
Roll-A-Reel 41
Roller Bearing Co. of America 108
Roper Hydraulics, Inc. 108
Rotary Lift Co. 63
Roura Iron Works, Inc. 49
Rowe Methods, Inc. 24
Ruberoid Co. 56
Ruger Equipment, Inc. 62

S

SKF Industries, Inc. 56, 57
Safway Steel Products, Inc... 16
Sarco Co., Inc. 49
Sargent & Co. 60
Schmidt, Geo. T., Inc. 23
Schrader's, A., Son, Div. of Scovill Mfg. Co., Inc....14, 10
Scintilla Div., Bendix Aviation Corp. 27
Set Screw & Mfg. Co. 73
Severance Tool Industries, Inc. 26
Sewall, E. B., Mfg. Co. 8
Sexauer, J. A., Mfg. Co. ... 16
Shenango Furnace Co., The .. 1
Signode Steel Strapping Co. 31, 7
Simplicity Engineering Co. .. 4
Skidmore-Wilhelm Mfg. Co. . 2
Skil Corp. 9
Skinner, M. B., Co. 3
Snap-On Tools Corp. 8
Sommer Metalcraft Corp. ... 8
Sonneborn, L., Sons, Inc. ..45, 4
Southern Screw Co. 5
Spaulding Fibre Co., Inc. ... 9
Speed Selector Inc. 8
Spee-Flo Co. 10
Sperry Products, Inc. 12, 1

raying Systems Co. 85
ringport Steel Products Co. 47
uare D Company 43
ackbin Corp. 39
ackpole Carbon Co. 30
andard Instrument Corp. .. 106
andard Pressed Steel Co... ..... 7, 59, 86
anley Works 46
ar Machine & Tool Co. ... 10
earns Electric Corp. 112
earns Magnetic Products, A Div. of Indiana Steel Products Co. 111
einen, Wm., Mfg. Co. 68
ephens-Adamson Mfg. Co. . 23
erling Electric Motors 12
eward, D. M., Mfg. Co. ... 78
ewart Warner Corp., Alemite Div. 32, 71
ow Mfg. Co. 74
ructoglas Div. of International Molded Plastics, Inc. 64
urtevant Mill Co. 42
ndstrand-American Broach Div. of Sundstrand Machine Tool Co. 98
nnen Products Co. 22
perior Tube Co. 37
rety Rubber Co. 77
torbilt Corp. 85
tton Mfg. Corp. 89
ift Glass Div., Swift Lubricator Co., Inc. 79
nthane Corp. 18

T

ylor Instrument Companies 90
eter, C. B. 93
mpil Corp. 82
ermoid Porter Div., H. K. Porter Company, Inc. 18
omas & Betts Co. 98
omson Industries, Inc. 28
teflex, Inc. 104
kheim Corp. 95
ledo Pipe Threading Machine Co. 52
lerton Co., The 60
mpkins-Johnson Co. 58
rit Mfg. Co. 35
ent, Inc. 29
ombetta Solenoid Corp. ... 7
opical Paint Co. 98
lsa Winch Div., Vickers, Inc. 25
rbo Machine Co. 68
rco Products, Inc. 23
in Disc Clutch Co. 61
-Sa-Man Machine Co. 100

U

ion Metal Mfg. Co. 56, 57
isorb Div. of The Felters Co. 57
S. Flexible Tubing Co. .. 66
S. Graphite Co. 9, 79
U. S. Hoffman Machinery Corp. 109
U. S. Safety Service Co. ... 68
U. S. Steel Corp. 12, 83
U. S. Steel Supply Div. of U. S. Steel 12
U. S. Stoneware Co. 92
Universal Shredder Co. 38

V

Vaco Products Co. 24
Valvair Div. of International Basic Economy Corp. 22
Vascoloy-Ramet Corp. 56
Veeder-Root, Inc. 72
Vega Industries, Inc. 2
Verson Allsteel Press Co. 90
Virginia Smelting Co. 42
Vogel Tool & Die Corp. 96

W

Wager, Robert H., Co. 6
Wagner Electric Corp. 80
Wales-Strippit, Inc. 36
Walton Co., The 65
Warner Electric Brake & Clutch Co. 65
Wassell Organization, Inc. .. 62
Waterloo Valve Spring Compressor Co. 50
Watlow Electric Mfg. Co. ... 106
Wayne Pump Co. 94
Weatherhead Co., The 13
Weber Marking Systems Div. of Weber Addressing Machine Co. 53
Webster Electric 20
Webster Instrument, Inc. 95
Webster Mfg., Inc. 93
Weller Electric Corp. 109
Wells Mfg. Corp. 67
Werner, R. D., Co., Inc. 97
West Bend Equipment Corp. . 56
West Chemical Products, Inc. 61
Westinghouse Air Brake Co.. 59
Wheel Trueing Tool Co. 75
White, S. S., Plastics Div. .. 38
Wiegand, Edwin L., Co. 4
Wilson, K. R., Inc. 31
Wilson's of Cleveland 19
Wilton Tool Mfg. Co. 72
Winzeler Mfg. & Tool Co. .. 29
Wire & Iron Products, Inc. .. 96
Wirth, Carl, & Son, Inc. .. 11
Wolverine Tube Div., Calumet & Hecla, Inc. 8, 100
Wood's, T. B., Sons Co. 65
Worcester Valve Co., Inc. .. 2
Wright-Austin Co. 80

Y

Yarnall-Waring Co. 51
Yoder Co., The 46

Z

Zagar, Inc. 2

Index to Products

A

rasive Products 13, 88, 89, 97, 106
hesives 14, 62, 108
Conditioning Equipment.. 62
Pads 65
rms 28, 72
oys 108
minum 92

B

ancing Equipment ..50, 90, 98
ls 54
kets 96
rings ..... , 9, 16, 17, 28, 31, 56, 57, 61, 5, 73, 78, 86, 89, 93, 98, 108
ows 72
ting 12, 18, 32, 100
ch Tops 60
ders 24, 41, 42, 70
s & Boxes 28, 34, 39, 46, 55, 56, 57
s 45, 52
ts 106
kes 36, 40, 112
aching Equipment 33, 77
nze 97
shes, Electric 79, 96
shes, Industrial 25
lding Materials 64

C

inets 50, 59
inets, Key 69
s 58
acitors 35
Spotters 23
bon & Graphite Products. 30, 79
ters 23, 63, 77, 78, 83, 84, 87, 94
tings 17
ents, Repair ..15, 24, 43, 110
ins & Fittings ..8, 17, 31, 42
irs & Stools 21
rgers, Battery 85
mping Devices 40, 43, 61, 62, 65, 100
mps, Lifting 27, 67
ners, Air 5
ners, Drain 5, 7, 112
ners, Vacuum 3, 24, 33, 36, 53, 105
ning Equipment, Blast..32, 88
ning Machines 65, 68, 75, 84, 100
ning Materials ...23, 42, 109
ches..18, 36, 40, 65, 103, 112
ting Equipment 76
tings, Protective 59, 70, 93, 94, 112
munications Equipment 100, 102
pressors 9, 76, 90, 94
densation Preventive ...59, 97
trols, Air & Hydraulic ... .16, 19, 43, 51
trols, Bin Level 65
trols, Combustion 32
trols, Electric ....10, 15, 28, 43, 51, , 76, 87, 89, 95, 98, 100, 106
trols, Level 80
trols, Pressure & Temperature .....12, 29, , 46, 49, 53, 57, 69, 74, 86, 93
trols, Production.62, 66, 80, 88
Controls, Remote 13
Conveyor Accessories 59, 81
Conveyors..1, 4, 6, 8, 15, 25, 40, 44, 45, 54, 87, 89, 90, 100, 103
Coolant Systems 98
Counting Devices 7, 22, 52, 59, 71, 72, 78, 85, 87
Couplings, Flexible.13, 20, 106, 107
Cranes 10, 12, 36, 62, 64, 68, 74, 77, 109
Cutters, Metal..64, 66, 74, 86, 100
Cutting Equipment, Gas 30
Cutoff Machines ...27, 42, 52, 61
Cylinders, Air & Hydraulic .. 15, 58, 84, 87, 97, 100, 103, 108

D

Detectors, Metal 35
Dies & Accessories 65
Dockboards & Ramps 8, 24, 56, 63, 78, 93, 112
Door Operators 84
Doors, Industrial 22, 83, 90, 91, 104
Draft Inducers 55
Drafting Equipment ...39, 98, 105
Drill Heads, Adjustable 48
Drilling Machines...16, 24, 29, 75
Drills & Accessories ...57, 68, 81
Drives, Machine 5, 11, 12, 17, 37, 42, 61, 68, 102
Drives, Variable Speed 9, 12, 20, 34, 47, 76, 93, 102
Drying Equipment 96
Dust Collectors 17, 25, 35, 65, 74, 94

E

Electronic Equipment 64, 102
Elevating Equipment 15, 30, 31, 35, 56, 67, 83, 90
Engines, Industrial 64, 75
Exhausters 55
Extrusions 103

F

Fabricating Equipment 46, 89
Fan & Blowers 3, 23, 45, 49, 61, 64, 72, 85, 89
Fasteners 6, 7, 8, 10, 18, 25, 39, 43, 44, 45, 46, 50, 52, 55, 57, 59, 67, 68, 73, 80, 86, 91, 94, 96, 101, 104, 109
Faucet Repairs 10
Feeders 1, 25, 31, 64, 69, 77, 79, 107
Feeders, Motorized Hopper .. 69
Felt Products 92
Fiber Products 4, 96
Files 3
Filtering Equipment 5, 24, 44, 57, 67, 70, 72, 80, 84, 100
Finishes 77, 93, 94, 101
Finishing Equipment 6, 9, 19, 50, 52, 60, 65, 66, 69, 71, 74, 81, 96, 108
Finishing Equipment, Blast .. 1
Fire Extinguishing Equipment 6, 18, 54
Flexible Shaft Equipment 74
Floor Machines 6, 24, 70, 76, 103, 109
Flooring Materials 18, 30, 34, 45, 47, 50, 78, 83, 89, 92, 97, 103, 112
Forgings 62, 93
Framing 44, 51
Furnaces, Industrial 72, 77
Fuses 56, 57

G

Gages, Precision 2, 5, 11, 22, 26, 41, 98
Gages, Pressure & Temperature 31, 49, 55, 60, 95
Gate Operators 100
Gearing.4, 19, 29, 44, 81, 106, 108
Generators, Steam 54, 101
Glass Products 79, 93
Glazing Materials 64
Gloves, Industrial 6, 11, 49, 64, 77, 84, 102
Goggles 22
Grating 78, 92
Grinding Equipment 8, 9, 19, 26, 70, 80

H

Hammers & Mallets 7, 75
Hardware 82, 90
Heat Exchangers 14, 54, 92
Heaters, Electric 3, 4, 29, 59, 82, 105, 106
Heaters, Electronic & Induction 55
Heaters, Unit 33, 91
Heating Equipment 96, 104
Hoists 9, 10, 13, 33, 36, 40, 59, 73, 79, 103, 104
Honing Equipment 22
Hose & Fittings ...13, 18, 27, 37, 60, 64, 66, 71, 82, 104, 107, 109

I

Incinerators 1, 52
Indicators, Flow 16, 53
Indicators, Pressure & Temperature 81, 82
Infrared Equipment 93
Inspection Equipment 2, 5, 22, 29, 41, 62, 73, 82, 104, 112
Instruments, Electric 1, 3, 15, 35, 46, 66, 96, 98
Insulation, Thermal ..56, 94, 107

J

Jacks 3
Jigs & Fixtures 2, 40, 62, 100
Joints, Rotating 14, 17, 44, 53
Joints, Universal 48

K

Keyseater 66
Knives & Blades 74

L

Labels 45, 57, 91, 98, 102
Ladders 55, 97
Laminated Materials 97
Lighting Equipment 9, 22
Lockers & Shelving 13, 37, 55, 85, 101
Lubricating Equipment & Materials 20, 28, 32, 37, 91, 95, 97, 107, 111, 112

M

Machine Tool Accessories ... .11, 12, 17, 35, 40, 51, 68, 73, 80, 81, 84, 86, 93, 100, 105
Machine Tools 4, 50, 58, 61, 66, 108
Magnetic Equipment 78, 80, 101, 111
Management 4
Marking Equipment ...17, 22, 26, 35, 40, 45, 51, 53, 86, 104, 110
Materials Handling Equipment 3, 4, 5, 6, 15, 20, 26, 27, 28, 31, 34, 41, 46, 47, 48, 49, 67, 71, 81, 87, 92, 93, 99, 101, 102, 106, 109
Materials Handling, Overhead 7, 15, 36, 70
Metals, Embossed & Perforated 4, 70
Meters, Flow 71
Meters, Tong Test 1, 35, 44
Mills 38, 48
Mixing Equipment 42, 44, 96
Mold Release 96
Monitors, Overload 12
Motors, Air & Hydraulic 52
Motors, Electric 11, 50, 54, 80, 85, 89, 104

N

Nailing Machines 23
Nameplates 1
Nozzles, Spray 31, 68, 85, 96
Nuts ..7, 43, 44, 46, 91, 101, 109

O

Office Equipment 37, 87, 88
Ovens, Industrial 58, 60

P

Packaging Equipment & Materials 12, 28, 32, 40, 58, 63, 74, 78, 83, 87, 92, 94, 108
Packings & Gaskets 82, 102, 109 111
Padlocks 30, 88
Paint Removers 47
Partitions 90
Parts, Precision 9, 26, 46, 93
Pens, Chart 78
Photoelectric Equipment ...21, 55
Pipe & Fittings 30, 37, 42, 49, 51, 63, 83, 90, 92, 94, 96, 99, 105, 107
Pipe & Thread Compounds 28, 107, 111, 112
Pipe Tools & Machines 24, 52
Plastic Panels, Reinforced .. 64
Plastics 4, 11, 14, 18, 76, 91, 94, 99, 101, 103, 107
Plating Equipment 78
Plugs & Caps 38
Ports, Inspection 6
Positioners 53, 60, 72, 79
Power Steering 76
Power Units, Hydraulic 83
Press Brakes 9, 15, 90
Presses.24, 31, 41, 45, 54, 98, 100
Presses, Molding 10
Process Equipment 41, 46, 53
Production Facilities 54
Pullers 23
Pulleys & Sheaves 2
Pumps 1, 3, 11, 13, 20, 26, 38, 43, 48, 55, 63, 65, 67, 71, 79, 83, 89, 98, 103, 108, 109
Pumps, Air & Vacuum 32, 85
Punches 36
Pyrometers 76

R

Racks 13, 15, 41, 42, 44, 51, 75, 99, 101, 102
Recorders, Industrial 45, 47, 73, 106
Reels, Cord 48
Reels, Stock 68
Refrigeration Equipment 62
Relays 28, 43, 46, 51, 56, 69, 81, 101
Reproduction Equipment & Material 34, 71, 76, 79, 88
Respirators 8, 14, 52
Riveting Equipment 34
Rod, Threaded 57
Rollers 10
Roofing Materials 97, 98, 101
Rubber Products 46, 61, 105
Rust Preventives 40, 76, 97, 104, 106
Rust solvents 76

S

Safety Equipment 6, 11, 16, 28, 30, 33, 34, 48, 58, 66, 68, 75, 78, 83, 86, 92, 93, 94, 106
Saw Blades 10
Saws, Metal & Wood 10, 18, 26, 36, 40, 50, 67, 75, 82, 100
Scaffolding...2, 16, 20, 50, 58, 88
Scales 61, 106, 110
Screwdrivers 24, 69
Screwdrivers, Power 38
Screws 7, 8, 39, 52, 55, 59, 67, 73, 94, 104, 109
Seals & Sealants 18, 38, 68, 70, 71, 91, 98, 99, 104, 105
Sharpeners, Saw 86
Shears 36, 63, 74, 88, 96
Shims 39, 82
Shop Equipment ..13, 37, 101, 104
Shredders 38, 51
Silicones 96
Sleeves 106
Slings & Fittings 14
Slitters & Rewinders 77
Snubbers, Exhaust 52
Soldering Equipment & Materials ..26, 30, 34, 92, 109, 112
Solenoids 7, 25
Speed Reducers 19, 25, 27, 30, 34, 43, 44, 56, 62, 72, 73, 74, 94, 106
Spray Equipment ..31, 68, 85, 96
Springs 21
Stampings 92
Stapling Equipment 19, 36, 84
Steel 69, 89, 94, 104
Straighteners 86
Strappers 47
Strapping, Steel 48, 78
Strip, Wear 107
Sweepers, Power ..6, 76, 103, 109

T

Tachometers ...19, 23, 29, 54, 82
Tackers 36, 84
Tape, Industrial 2, 101
Tapping Attachments & Equipment 16, 51, 58, 65, 66, 87
Testing Equipment 11, 15, 26, 39, 58, 64, 67, 106
Thermometers 18, 60, 90
Timing Devices 33, 72, 108
Tires, Industrial..8, 16, 23, 29, 33
Tools, Cleaning 11
Tools, Cutting 26, 37, 56
Tools, Hand 12, 14, 41, 60, 69, 81, 92
Tools, Pneumatic 105
Tools, Portable Electric 34, 80, 82, 99, 112
Tools, Torque 2, 20
Trailers, Industrial 72
Traps, Air & Steam 49, 80
Treads, Stair 28, 92
Trucks, Hand...20, 23, 28, 33, 78
Trucks, Industrial Power..17, 19, 31, 32, 39, 64, 73, 82, 90, 95, 103
Tubing & Fittings 8, 13, 27, 30, 33, 37, 58, 69, 85, 92, 93, 94, 95, 100
Turntables 1

U

Ultrasonic Equipment 5, 10

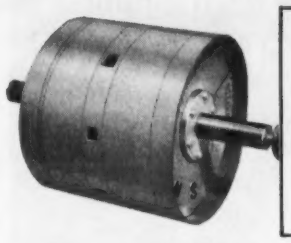
V

Valves 1, 2, 5, 8, 22, 27, 29, 32, 34, 37, 38, 39, 43, 47, 59, 63, 75, 91, 94, 99, 100, 102, 104, 108
Ventilating Equipment ..19, 71, 77
Vibration Absorbers 38, 41, 45, 49, 57, 88, 109
Vibration Protection Equipment 48, 66
Vibrators 42, 107
Vises 39

W

Washers 4
Washroom Equipment 29, 61
Water Coolers 7
Water Heaters 67
Water Treatment 42, 107
Way Protectors 106
Welding Equipment 2, 21, 32, 43, 46, 53, 79, 90, 102, 108
Wheels, Industrial 3, 20, 23, 68, 90
Winches 7, 29
Winders, Spring 71
Winding Equipment 102
Wires 38, 94
Wire Cloth & Screen 67
Wire, Electric 90
Wire Rope & Fittings 27, 31, 53, 60
Wire Specialties 62, 85, 102
Wiring Devices 12, 14, 25, 27, 47, 56, 70, 75, 77, 98, 106
Workbenches & Tops 3, 60
Wrenches 58
Wrought Iron 99

New STEARNS Electromagnetic Pulley



. . . Boosts Tramp Iron Removal on Heavily-Loaded Conveyors

Stearns' powerful new electromagnetic pulley gives you tremendous power for removing tramp iron — costs less, too. Here's why!

Two-coil design produces a magnetic field that's deepest at the center of the conveyor belt where load is heaviest. That's why smaller 2-coil pulleys, costing less, can be used on many jobs without altering standard conveyor practices for belt speed, loading, etc.

NEW FREE BULLETIN — Simplified pulley selection charts tell you how to choose a magnetic pulley yourself—and be right. Send for new Stearns Bulletin 1011-L.

STEARNS MAGNETIC PRODUCTS
A DIVISION OF THE INDIANA STEEL PRODUCTS COMPANY
635 South 28th Street, Milwaukee 46, Wisconsin

▲ For more details circle NED-1033 F9 on enclosed inquiry slip ▲

IF YOU HAVE THREADED FITTINGS...

YOU NEED
LED-PLATE
ANTI-SEIZE SEALING COMPOUND
For Assembly, Maintenance and Production

HIGH PRESSURE SEALANT a real thread sealer, pressures held to 50,000 psi hydraulic fluids, 3500 psi air, 1000 psi gases. Has UL approval. For gases, steam, air, ammonia, hydraulic fluids.
CORROSION PROTECTION no corrosion weld, prevents rusting, acid-etch, etc.
NO GALLING OR SEIZING recommended for aluminum, stainless, titanium, plastic, steel, brass, etc.
ALL-AROUND THREAD LUBRICANT for economical assembly, maintenance and production. An excellent anti-seize sealant for piping and gasketing.

SEND FOR FREE SAMPLE!

APPROVED for Butane, Propane, Gasoline, Petroleum Oils.

ARMITE LABORATORIES
6609 BROAD STREET · LOS ANGELES 1, CALIF. U.S.A.

▲ For more details circle NED-1034 F9 on enclosed inquiry slip ▲

Flexrock Teflon* Packing no. 405

Constructed of fine Teflon fibers tightly braided over a resilient core of glass fiber and impregnated with Teflon. Flexrock 405 is an excellent chemical packing. It is especially recommended for use against concentrated acids such as sulphuric, nitric, sodium hydroxide; alkalies, etc. Flexrock 405 Teflon Packing has a maximum temperature range of 500°F., and comes in sizes of 3/16" to 1". Smaller sizes available with solid core.

*DuPont's trade name for tetrafluoroethylene

MAIL COUPON FOR FREE BROCHURE

FLEXROCK COMPANY
Mechanical Packing Division
3603 Filbert Street, Philadelphia 1, Penna.

Please send additional information on Flexrock 405 and other Teflon Packings.

Company _____
Address _____
City _____ State _____
Name _____ Title _____

▲ For more details circle NED-1035 F9 on enclosed inquiry slip ▲

Stearns miniature electromagnetic CLUTCH-BRAKE

STYLE "MP" — Size No. 3

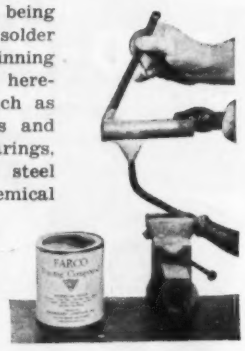
Torque Rating . . . Brake — 8 oz. in.; Clutch — 100 oz. in. Rated Voltage—28 VDC (4.2 Watts) • Weight—15.25 oz. "Fail-Safe," spring-actuated brake • Stationary Housing

For Superior Performance . . . Specify Stearns!

For complete miniature data request
Bulletin No. 504-D
Stearns ELECTRIC CORPORATION
120 NORTH BROADWAY
MILWAUKEE 2, WISCONSIN

▲ For more details circle **NED-1038 F9** on enclosed inquiry slip ▲

TINS ALL METALS



Difficult tinning problems are being solved with a new powdered solder containing flux, called Farco Tinning Compound which permits jobs heretofore considered impossible, such as tinning cast iron water jackets and cylinder heads, cast steel bearings, pipes, cylinders and stainless steel equipment. The powerful chemical formula will lift the oxides from aluminum, and on other metals is more drastic than ordinary acids. Makes it possible to lift the scale and tin black iron in one operation. Stability of the new powder makes it possible to judge heat on large bearings by its action in turning liquid when proper temperature for tinning is reached. Although strong enough to remove scale, dirt, and tin rusty surfaces thoroughly, it is completely stable and will not liquefy in can. When used on gasoline motors, Diesel and marine engine bearings it is reported to increase performance life 100%. The compound may be applied with either torch or soldering iron depending on thickness of metal, and any good grade of solder may be used. Packed in 1½ lb. cans, price $3.00 f.o.b.

Have you tried #1 Acid Brushes, 25% more hair $3.50 per gross, f.o.b. Philadelphia. *Advt.*

FARRELLOY CO.
1246 North 26th St. Phila. 21, Pa.

▲ For more details circle **NED-1039 F9** on enclosed inquiry slip ▲

NEW! WATER IMPACT SAVES PLUMBING BILLS

Cleans Instantly Difficult Stoppages — Sewers ½" to 6" Diam.

SIMPLE TO OPERATE, THIS NEW GUN DELIVERS AN IMPACT WHICH INSTANTLY DISLODGES OBSTRUCTIONS. NO NEED TO REMOVE PIPE, GREASE TRAP, OR CROSS PIECE.

CHICAGO, June 1st—Just introduced is a Free Booklet on a New Discovery which enables the Janitor, Maintenance Man, or Home Owner to clean any clogged Sewer Drain.

Yet anyone can operate this new **Plumbers Flushing Gun** which releases air pressure on a solid shaft of water cleaning the most stubborn stoppages up to 200 feet. TOILETS, SINKS, URINALS, BATHTUBS, FLOOR DRAINS, and HOUSE - TO - STREET SEWERS clogged with Grease, Rags, Sand, Roots and paper melt away instantly when struck by the Hammer-like blow of this new unit.

There is no need to remove wall or pipe, or Grease Trap. A special attachment allows water to flow from the faucet through the Gun while air is released on the pipe. Vents or stacks are no obstacle, as force tends to strike wherever the water lays. But now, what is this Plumbers Flushing Gun worth in **COSTLY PLUMBING BILLS SAVED?** Tear this Ad out now—and write your name and address beside it for **FREE BOOKLET.** Obey that urge. No Agent will call. A postcard will do (Chicago Phone KIldare 5-1702).

MILLER SEWER ROD COMPANY, DEPT. NE-6
4642 North Central Ave., Chicago 30, Illinois

▲ For more details circle **NED-1040 F9** on enclosed inquiry slip ▲

New Processes & Materials

SPRAY-ON LUBRICANT
molybdenum disulfide type

Aerosol spray can contains Molylube 16, a dispersion of microfine molybdenum disulfide lubricant that is effective over a −100 to 750° F range. Lubricant carrier is nontoxic, noncorrosive, and nonflammable. The dry solid film lubricant has a particle size of less than 1 micron and will resist the attack of most acids. It withstands pressures of over 100,000 psi. Application is to any clean surface. Made by **Bel-Ray Co.,** Green Village Road, Madison, N. J.

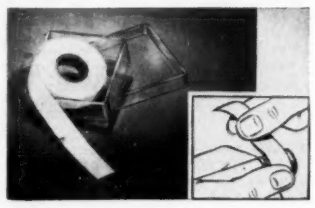
▲ For more details circle **NED-1041 F9** on enclosed inquiry slip ▲

PROTECTIVE COATING
for metallic, nonmetallic surfaces

Excellent abrasion resistance during blanking, routing, cold dimpling, shearing, rolling, drilling, sawing, and riveting is provided by Fabrifilm protective coating. Developed for in-shop protection of metallic and nonmetallic surfaces during storage, forming, and fabricating, it is easily removed with solvent or alkali. Coating repels moisture and protects surfaces from corrosion and scratches. Application of the blue-colored coating is by spray. Removal from large assembled objects is by spraying with Fabrifilm Remover, then hosing off with water or steam cleaning. Standard color is blue, but natural or any other color can be ordered. Made by **Turco Products, Inc.,** 6135 S. Central Ave., Los Angeles 1, Calif.

▲ For more details circle **NED-1042 F9** on enclosed inquiry slip ▲

PIPE JOINT SEALING TAPE
has -250 to 500° F temperature range



All types of threaded connections handling most industrial acids, corrosives, caustics, hydraulic fluids, and aromatic fuels are sealed by Thred-Tape, made from Dupont Teflon. Suited for high pressure and from −250 to 500° F, it can also be used with alkalies, toxics, biological, and gas service. Tape prevents seizing and galling, is self-lubricating, and can be used on plastic, aluminum, stainless steel, ceramic, synthetic rubber, and carbon pipe. It is available in ½ x 288-in. rolls and is applied by wrapping tightly around the male threads. Made by **Crane Packing Co.,** Dept. ND-5, 6400 Oakton St., Morton Grove, Ill.

▲ For more details circle **NED-1043 F9** on enclosed inquiry slip ▲

UNUSUAL BARGAINS

Check, Measure, Inspect with this 6 POWER POCKET COMPARATOR

(Complete with Leather Case)
MEASURES • Angles • Radii • Circles • Linear—in both decimal inches and millimeters.
Used to check layouts, machining on tools, dies, gauges; to check threads, chamfers, wear on cutting tools, etc.

Stock No. 30,061-AE . . New Low Price . $19.50 Pstpd.
Send Check or M.O.—or order on open account.

HANDY! FAST! ACCURATE!

STEREO-MICROSCOPE Terrific Buy! American Made!

Other American made Stereos cost $250.00 to $600.00 and more! Now—save well over 50%! **Up to 3" Working Distance—Wide 3 Dimensional Field**—Used in production, in research, or at home; for inspections, examinations, counting, checking, assembling. 2 sets of objectives on rotating turret. Standard pair of wide field 10X Kellner Eyepieces give you 23 power and 40 power clear, sharp, erect image. Helical rack and pinion focusing. Interpupillary distance adjustable. SO GOOD, WE'LL SHIP ON 10-DAY FREE TRIAL. **Stock No. 85,056-AE—full price, $99.50 f.o.b. Barrington, N. J. Low Power Supplementary Lens Attachment for above Stereo—provides 15X down to 6X with clear, extra large 1½" field at 6X. Stock #30,276-AE** **$7.50**
Order by Stock No. Send Check or M.O.—or order on open account.

GIANT MAGNETS! TERRIFIC BARGAINS!

War surplus—Alnico V-type! Horseshoe shape. Tremendous lifting power. 5 lb. size. Dimensions: A—3¼"; B—2¾"; C—4-3/16"; D—1¼"; E—1¼"; F—2⅝". Strength is about 2,000 Gauss. Will lift over 125 lbs.
Stock No. 70,183-AE . . . . . **$8.50 ppd.**
15¾ lb size magnet. Approximately 5,000-6,000 Gauss rating. Will lift over 250 lbs.
Stock No. 85,088-AE . . . . . **$22.50 F.O.B.** Barrington, N. J.
Shipping weight 22 lbs.
Order by Stock No.—Check, M.O. or Open Account—Money-back Guarantee

FREE! Giant CATALOG of OPTICAL BUYS!

OVER 1,000 OPTICAL ITEMS . . . Many on-the-job helps . . . quality control aids! 100 pages — hundreds of illustrations. Many war surplus bargains! Imported instruments! Lenses, Prisms, Magnifiers, Telescopes, Satellite Scopes, Microscopes, Binoculars, etc. Optics for industry, research labs, experimenters, hobbyists. No obligation. Write for FREE Catalog AE

EDMUND SCIENTIFIC CO., Barrington, N. J.

▲ For more details circle **NED-1044 F9** on enclosed inquiry slip ▲

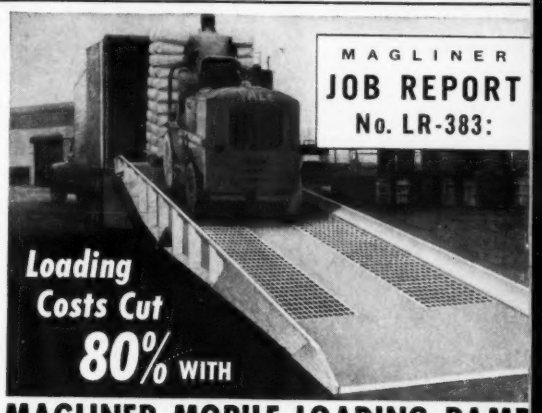
Black & Decker Portable Grinders

Take the tool to the work for finish grinding, removing burrs or wire brushing with a B&D 2½", 5" or 6" Portable Grinder. Designed for operator comfort—power-built for long, trouble-free life. Call your distributor for a demonstration or write: THE BLACK & DECKER MFG. CO., Dept. 1906, Towson 4, Md. (In Canada: Brockville, Ontario.)

Look Under "TOOLS-ELECTRIC" in Yellow Pages

Leading Distributors Everywhere Sell
Black & Decker®
Quality Electric Tools . . . Power-Built to set the pace

▲ For more details circle **NED-1045 F9** on enclosed inquiry slip ▲



MAGLINER MOBILE LOADING RAMP

"Before installing our Magliner Mobile Loading Ramp," reports Mr. Leonard Wood, Plant Manager, Witco Chemical Co., "It took 16 to 18 manhours to unload a railcar from ground-level, and four manhours to unload a truck. Three men were required to handle each job. *Now, one man and power truck handle a truck shipment in fifteen minutes . . . a railcar shipment in four hours.* We figure our Magliner Loading Ramp paid for itself in six months, besides giving us extra safety for men, loads and equipment, and reducing our lift truck maintenance."

ASK ABOUT THE MAGLINER PROOF POSITIVE PLAN—See a Magliner mobile loading ramp at work, cutting costs right in your own operation.

Now Available! NEW NON-SLIP GRATING SURFACES FOR SAFE, SURE TRACTION IN ANY WEATHER
Another Magliner Exclusive!

Magliner MAGNESIUM MOBILE LOADING RAMP

Write for Bulletin DB-211, Magline Inc., P.O. Box 426, Pinconning, Mich.

▲ For more details circle **NED-1046 F9** on enclosed inquiry slip ▲

TRY IT! MAIL COUPON

THIS TOUGH CONCRETE PATC SETS INSTANTL

Repair broken factory floors without the usual traffic tie-up. Simply sh INSTANT-USE into hole or rut—tamp smooth—truck over! No waiting! INSTA USE bonds tight to old concrete . . . right up to a feather edge. It's tou Wears like iron. Won't crack or crumble. Install complete overlay where fl are badly chewed up. Used indoors or out. Immediate shipment.

MAIL COUPON for TRIAL OFFER and FREE BROCHURE

INSTANT-USE

FLEXROCK COMPANY (Offices in principal cities)
3603 Filbert St., Philadelphia 1, Pa.

Please send me complete INSTANT-USE information, details of TRIAL ORDER PLAN and Free INSTANT-USE BROCHURE—no obligation. (Clip and attach Coupon to Co. letterhead.)

Name .....
Title .....
Company .....
Address .....

▲ For more details circle **NED-1047 F9** on enclosed inquiry slip